

Written in  
NZ for NZ

# Help Me at HOME Series

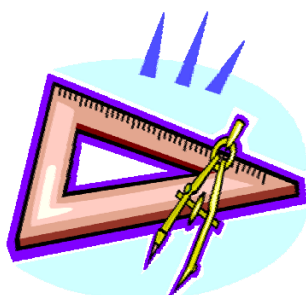


## Mathematics Student Workbook

### Book 4

40x Number Knowledge Worksheets

40x Curriculum Strand Worksheets



This resource covers **Level 2** and some **Level 3** achievement objectives as outlined in the

**Mathematics in the New Zealand Curriculum**

for the strands ...

**Number** & **Algebra**, **Measurement** & **Geometry** and **Statistics**

and supports the **Numeracy Professional Development Project - Stages 5 to 6**

Name: \_\_\_\_\_ Class: \_\_\_\_\_

Author: A. W. Stark





# Mathematics

## Student Workbook

40x Number Knowledge Worksheets

40x Curriculum Strand Worksheets

This resource supports the  
Numeracy Professional Development  
Project  
Stages 5 & 6  
and covers Level 2/3 of the achievement  
objectives as outlined in the  
*Mathematics in the New Zealand  
Curriculum*  
for the strands ...  
Number & Algebra,  
Measurement & Geometry  
and Statistics

Name: \_\_\_\_\_ Class: \_\_\_\_\_

Author: A. W. Stark



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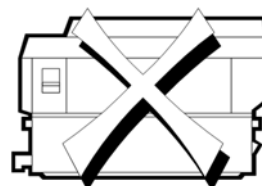
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## Note from the author:

About ...

## Help Me at Home Student Workbooks

This resource is one of a series of 8 resources written to support the **Numeracy Project** currently being implemented within many New Zealand schools and covers the achievement objectives as outlined in the **Mathematics in the New Zealand Curriculum** (2007 revised edition) document for the teaching areas or strands of ...

**Number & Algebra, Measurement & Geometry and Statistics.**

Note: The Number Knowledge section covers many of the Number & Algebra Achievement Objectives.

## Background Information:

The *Numeracy Professional Development Project* being implemented in many schools involves a **knowledge section** and a **strategy section**.

The **knowledge section** introduces and revises the key number knowledge facts required.

The **strategy section** describes the mental processes students employ to estimate answers and solve problems involving the four operations of addition, subtraction, multiplication and division.

The **strategy stages** are listed in this table below.

The aim of this project is to equip students with various strategies that allow them to be successful at Mathematics.

**In order for this to occur, it is essential for students to be confident with number knowledge.**

	Strategy Stages
0	Emergent
1	One-to-one Counting
2	Counting from One on Materials
3	Counting from One by Imaging
4	Advanced Counting (Counting On)
5	Early Additive Part-Whole
6	Advanced Additive Part-Whole
7	Advanced Multiplicative Part-Whole
8	Advanced Proportional Part-Whole

Without the 'knowledge', that is knowing the basic numeracy facts, it is difficult for a student to progress through the strategy stages. Students move through the strategy stages at different rates and may be working at different stages given a certain problem. This is often a result of gaps in key knowledge, hence it CANNOT be stressed enough the importance of learning the numeracy facts. How your child learns the numeracy facts is not as important as knowing them.

# How to use this resource

## Number Knowledge Worksheets Section

(Pages 8 to 12, 14 to 18, 20 to 24 & 26 to 30)

The **40 worksheets** in this section systematically introduce and revise numeracy facts and number knowledge strategies.

- Presented in different formats, these worksheets are designed to reinforce the **Numeracy Development Programme**. It is intended that one worksheet per week is completed in the order presented, from worksheet 1 to worksheet 40.
- One worksheet from the **Curriculum Strand Worksheet** section is selected to be done in conjunction with the **Number Knowledge Worksheet**.
- This book covers **Strategy Stages 5 & 6**.

One Worksheet from each section to be completed each week

## Curriculum Strand Worksheets Section

(Pages 34 to 73)

- The **40 worksheets** in this section cover the Achievement Objectives as outlined in **Mathematics in the New Zealand Curriculum** for Number & Algebra, Measurement & Geometry and Statistics.
- These worksheets can be completed in any order.
- The **Curriculum Strand Worksheet** selected is to be done in conjunction with the **Number Knowledge Worksheet**.
- The **Curriculum Strand Worksheet** selected relates to the topic being covered at school or as revision.
- This book revises Level 2 of the **Curriculum** and introduces some Level 3.

## 4x Number Knowledge Progress Assessments

(Pages 13, 19, 25 & 31)

An **oral** progress assessment is available after every **10 Number Knowledge** worksheets.

Note to Parents / Care-givers:

- Success in mathematics is greatly enhanced by having a good understanding of Number Knowledge. That is, from being able to add, subtract, multiply and divide with confidence, .... with success .... comes enjoyment.
- The aim of this resource is to provide you with a systematic and comprehensive series of worksheets, offering you guidance as to how mathematics is taught within schools.
- **Each strand worksheet has an EXTENSION activity for you to do with your child to reinforce ideas covered in the worksheet.**

How can you help?

- Sit with your child as they work through each worksheet. Help them to understand what is required from each question, but try to avoid telling them the answers.

### Numeracy Facts:

At the back of this resource there is a table of ALL numeracy facts introduced in this resource.

These tables can be used when assessing your child's Number Knowledge skill level.

There is also a 1 to 100 number matrix to assist your child to count in 1's up to 100.

Page	Number Knowledge Worksheet	Curriculum Strand Worksheet Enter the worksheet number you are doing this week	Tick when completed
8	1		
8	2		
9	3		
9	4		
10	5		
10	6		
11	7		
11	8		
12	9		
12	10		
13	<b>Number Knowledge Progress Assessment 1</b>		
14	11		
14	12		
15	13		
15	14		
16	15		
16	16		
17	17		
17	18		
18	19		
18	20		
19	<b>Number Knowledge Progress Assessment 2</b>		

Page	Number Knowledge Worksheet	Curriculum Strand Worksheet Enter the worksheet number you are doing this week	Tick when completed
20	21		
20	22		
21	23		
21	24		
22	25		
22	26		
23	27		
23	28		
24	29		
24	30		
25	<b>Number Knowledge Progress Assessment 3</b>		
26	31		
26	32		
27	33		
27	34		
28	35		
28	36		
29	37		
29	38		
30	39		
30	40		
31	<b>Number Knowledge Progress Assessment 4</b>		

# Curriculum Strand Worksheets

(Tick next to worksheet as each ONE is completed)

Page 34	1	Reading and writing whole numbers	Tick	Page 54	21	Analogue & digital time	Tick
35	2	Reading and writing decimal numbers		55	22	Units of time, a.m. / p.m. time & timetables	
36	3	Addition and subtraction strategies		56	23	NZ coins and notes	
37	4	Numeracy facts revision		57	24	Working with money	
38	5	Ordering whole numbers and decimals		58	25	Finding area by counting squares	
39	6	Place value		59	26	Finding volume by counting cubes	
40	7	Rounding numbers and estimating answers		60	27	2-Dimensional shapes	
41	8	Multiples of 4's / multiplication facts		61	28	3-Dimensional shapes	
42	9	Multiples of 6's / multiplication facts		62	29	Describing 3-Dimensional objects	
43	10	Introducing division by 'grouping' - 4 & 5		63	30	Maps / Compass directions	
44	11	Multiplication strategies		64	31	Rotation & reflection	
45	12	Division strategies		65	32	Translation & enlargements	
46	13	Working with fractions		66	33	Sorting into groups	
47	14	Understanding fractions		67	34	Tables & tally charts	
48	15	Solving equations		68	35	Column graphs & pictograms	
49	16	Measuring units - length		69	36	Stem and leaf graphs & dot plots	
50	17	Reading scales / measuring & drawing lines		70	37	Conducting an investigation	
51	18	Measuring units - weight (mass)		71	38	Probability words & scales	
52	19	Measuring units - volume (capacity)		72	39	Finding outcomes	
53	20	Temperature		73	40	Simple probability experiments	



## Number Knowledge Worksheet Section

The following activities are covered in worksheets 1 to 10:

- **Read and write** numbers while **skip counting** in **2's, 3's, 4's, 5's, 6's** and **10's** in a **forward** or **backward** sequence.  
*Example:* 10, 20, 30, \_\_\_\_, 50, \_\_\_\_, 70, \_\_\_\_, 90, \_\_\_\_, 110, 120, \_\_\_\_, 140, \_\_\_\_ etc.
- **Skip counting** in **2's, 3's, 4's, 5's, 6's** and **10's** **write** the number that comes **after**, **before** or **between** the given numbers.  
*Example:* after 30, \_\_\_\_, before \_\_\_\_, 70 between 90, \_\_\_\_, 110
- **Write** five 2 or 3 digit numbers including decimals in **order** from **smallest to largest** or **largest to smallest**.  
*Example:* 61, 235, 78, 153, 29 (Note: Either odd numbers or even numbers are underlined)
- **One of FIVE activities:**  
Writing number words as numerals, rounding numbers to the nearest 10, finding a fraction of a group of shapes, using an abacus to explore place value and simple word problems.
- **Revising** the number combinations that add up to and include 18.  
*Example:*  $8 + 5 = \underline{\quad}$ ,  $7 + \underline{\quad} = 16$  etc. (Note: Have a supply of objects to model each question, if required)
- **Adding** 2 or 3-digit numbers using any appropriate **addition strategy**.  
*Example:*  $66 + 43 = 60 + 40 + 6 + 3 = 100 + 9 = 109$  (Adding 10's and 1's separately)  
*Example:*  $38 + 17 + 12 = 50 + 17 = 67$  (Making 'tidy' numbers and groups of 10)
- Using **skip counting** in **2's, 3's, 4's, 5's** and **10's** to revise the 2x, 3x, 5x and 10x and introduce 4x **multiplication facts** and introduce the appropriate **division facts**.  
*Example:*  $9 \times 2 = \underline{\quad}$ ,  $7 \times 10 = \underline{\quad}$ ,  $3 \times \underline{\quad} = 21$  and  $35 \div 5 = \underline{\quad}$

The following activities are covered in worksheets 11 to 20:

- **Read and write** numbers while **skip counting** in **2's, 3's, 4's, 5's, 6's** and **10's** in a **forward** or **backward** sequence.  
*Example:* 10, 20, 30, \_\_\_\_, 50, \_\_\_\_, 70, \_\_\_\_, 90, \_\_\_\_, 110, 120, \_\_\_\_, 140, \_\_\_\_ etc.
- **Skip counting** in **3's, 4's, 5's, 6's** and **10's** **write** the number that comes **after**, **before** or **between** the given numbers.  
*Example:* after 30, \_\_\_\_, before \_\_\_\_, 70 between 90, \_\_\_\_, 110
- **One of SEVEN activities:**  
Writing decimal numbers in order, writing number words as numerals, rounding numbers to the nearest 10 or 100 and estimating answers, finding a fraction of a group of shapes, explore place value, solving equations and simple word problems.
- **Revising** the number combinations that add up to and include 18.  
*Example:*  $8 + 5 = \underline{\quad}$ ,  $7 + \underline{\quad} = 16$  etc. (Note: Have a supply of objects to model each question, if required)
- **Adding** 2 or 3-digit numbers using any appropriate **addition strategy**.  
*Example:*  $83 + 74 = 80 + 70 + 3 + 4 = 150 + 7 = 157$  (Adding 10's and 1's separately)  
*Example:*  $65 + 27 + 5 = 70 + 27 = 97$  (Making 'tidy' numbers and groups of 10)
- Using **skip counting** in **2's, 3's, 4's** and **6's** to revise the 2x, 3x and 4x and introduce the 6x **multiplication facts** and introduce the appropriate **division facts**.  
*Example:*  $9 \times 4 = \underline{\quad}$ ,  $7 \times 3 = \underline{\quad}$ ,  $3 \times \underline{\quad} = 27$  and  $36 \div 6 = \underline{\quad}$

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The following activities are covered in worksheets 21 to 30:

- **Read and write** numbers while **skip counting** in **2's, 3's, 4's, 5's, 6's** and **10's** in a **forward** or **backward** sequence.  
*Example:* 4, 8, 12, \_\_\_\_\_, 20, \_\_\_\_\_, 28, \_\_\_\_\_, 36, \_\_\_\_\_, 44, 48 etc.
- **Skip counting** in **3's, 4's, 5's, 6's** and **10's** **write** the number that comes **after, before** or **between** the given numbers.  
*Example:* after 54, \_\_\_\_\_, before \_\_\_\_\_, 24 between 30, \_\_\_\_\_, 42
- **One of NINE activities involving ...**  
Writing decimal numbers in order, rounding numbers to the nearest 10 or 100, adding up number matrices, writing numerals as number words, writing number words as numerals, working with fractions, understanding place value, multiplying large numbers using various strategies and simple word problems.
- **Revising** the number combinations that add up to and include 18.  
*Example:*  $13 + 4 = \underline{\hspace{1cm}}$ ,  $7 + \underline{\hspace{1cm}} = 14$  etc. (Note: Have a supply of objects to model each question, if required)
- **Adding** 2 or 3-digit numbers using any appropriate **addition strategy**.  
*Example:*  $82 + 57 = 80 + 50 + 2 + 7 = 130 + 9 = 139$  (Adding 10's and 1's separately)  
*Example:*  $91 + 19 + 35 = 110 + 35 = 145$  (Making 'tidy' numbers or groups of 10)
- Using **skip counting** in **2's, 3's, 4's, 6's** and **10's** to revise the 2x, 3x, 4x, 6x and 10x **multiplication facts** and revise the appropriate **division facts**.  
*Example:*  $6 \times 5 = \underline{\hspace{1cm}}$ ,  $9 \times 4 = \underline{\hspace{1cm}}$ ,  $5 \times \underline{\hspace{1cm}} = 50$  and  $24 \div 3 = \underline{\hspace{1cm}}$

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The following activities are covered in worksheets 31 to 40:

- **Read and write** numbers while **skip counting** in **2's, 3's, 4's, 5's, 6's** and **10's** in a **forward** or **backward** sequence.  
*Example:* 10, 20, 30, \_\_\_\_\_, 50, \_\_\_\_\_, 70, \_\_\_\_\_, 90, \_\_\_\_\_, 110, 120, \_\_\_\_\_, 140, \_\_\_\_\_ etc.
- **Skip counting** in **3's, 4's, 5's, 6's** and **10's** **write** the number that comes **after, before** or **between** the given numbers.  
*Example:* after 28, \_\_\_\_\_, before \_\_\_\_\_, 54 between 32, \_\_\_\_\_, 40
- **One of NINE activities involving ...**  
Writing decimal numbers in order, rounding numbers to the nearest 10 or 100, adding up number matrices, writing numerals as number words, writing number words as numerals, working with fractions, understanding place value, multiplying large numbers using various strategies and simple word problems.
- **Revising** the number combinations that add up to and include 18.  
*Example:*  $8 + 6 = \underline{\hspace{1cm}}$ ,  $14 + \underline{\hspace{1cm}} = 16$  etc. (Note: Have a supply of objects to model each question, if required)
- **Adding** 2 or 3-digit numbers using any appropriate **addition strategy**.  
*Example:*  $293 + 193 = 200 + 100 + 90 + 90 + 3 + 3 = 486$  (Adding 10's and 1's separately)  
*Example:*  $62 + 148 + 14 = 210 + 14 = 224$  (Making 'tidy' numbers and groups of 10)
- Using **skip counting** in **3's, 4's, 5's, 6's** and **10's** to revise the 3x, 4x, 5x, 6x and 10x **multiplication facts** and revise the appropriate **division facts**.  
*Example:*  $7 \times 3 = \underline{\hspace{1cm}}$ ,  $6 \times 7 = \underline{\hspace{1cm}}$ ,  $4 \times \underline{\hspace{1cm}} = 32$  and  $28 \div 4 = \underline{\hspace{1cm}}$



- (1) Write in the missing numbers as you skip count in 2's.



\_\_\_\_\_, 4, 6, \_\_\_\_\_, \_\_\_\_\_, 12, \_\_\_\_\_, 16,  
\_\_\_\_\_, 20, \_\_\_\_\_, \_\_\_\_\_, 26, 28, \_\_\_\_\_, 32

- (2) Skip counting in 10's, write the number that comes before ...

\_\_\_\_\_, 30 \_\_\_\_\_, 50 \_\_\_\_\_, 80

- (3) Write these numbers in order from smallest to largest. Underline the odd numbers.



826  
30  
164  
58  
381

\_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

- (4) Write these number words as numerals.

ninety-two \_\_\_\_\_ forty-five \_\_\_\_\_

fifty-four \_\_\_\_\_ twenty-nine \_\_\_\_\_

one hundred and seventy-two \_\_\_\_\_

Add and subtract these numbers.

(5)  $11 + 5 =$  \_\_\_\_\_ (10)  $15 - 3 =$  \_\_\_\_\_

(6)  $2 + 8 =$  \_\_\_\_\_ (11)  $10 - 7 =$  \_\_\_\_\_

(7)  $8 + 6 =$  \_\_\_\_\_ (12)  $12 - 3 =$  \_\_\_\_\_

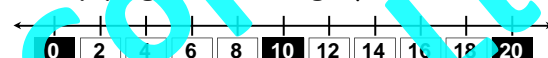
(8)  $8 + 8 =$  \_\_\_\_\_ (13)  $18 - 4 =$  \_\_\_\_\_

(9)  $15 + 3 =$  \_\_\_\_\_ (14)  $15 - 7 =$  \_\_\_\_\_

(15)  $55 + 19 + 25 =$  \_\_\_\_\_

(16)  $45 + 71 =$  \_\_\_\_\_

Multiplying and dividing by 2



(17)  $2 \times 5 =$  \_\_\_\_\_ (22)  $2 \div 2 =$  \_\_\_\_\_

(18)  $2 \times 2 =$  \_\_\_\_\_ (23)  $8 \div 2 =$  \_\_\_\_\_

(19)  $2 \times 7 =$  \_\_\_\_\_ (24)  $12 \div 2 =$  \_\_\_\_\_

(20) \_\_\_\_\_  $\times 2 = 6$  (25)  $18 \div 2 =$  \_\_\_\_\_

(21)  $2 \times$  \_\_\_\_\_  $= 16$  (26)  $20 \div 2 =$  \_\_\_\_\_

- (1) Write in the missing numbers as you skip count in 10's.



10, 20, \_\_\_\_\_, 40, 50, \_\_\_\_\_, 70, 80, \_\_\_\_\_,  
\_\_\_\_\_, 110, \_\_\_\_\_, \_\_\_\_\_, 140, \_\_\_\_\_, \_\_\_\_\_

- (2) Skip counting in 5's, write the number that is between ...

5 \_\_\_\_\_ 15, 25 \_\_\_\_\_ 35, 50 \_\_\_\_\_ 60

- (3) Write these numbers in order from largest to smallest. Underline the even numbers.



31  
705  
56  
163  
40

\_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

- (4) Round these numbers to the nearest 10's.



562 = \_\_\_\_\_ 128 = \_\_\_\_\_

709 = \_\_\_\_\_ 434 = \_\_\_\_\_

Add and subtract these numbers.

(5)  $12 + 3 =$  \_\_\_\_\_ (10)  $18 - 7 =$  \_\_\_\_\_

(6)  $3 + 7 =$  \_\_\_\_\_ (11)  $10 - 4 =$  \_\_\_\_\_

(7)  $9 + 3 =$  \_\_\_\_\_ (12)  $12 - 7 =$  \_\_\_\_\_

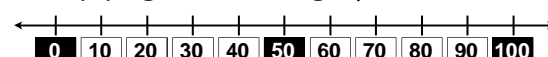
(8)  $14 + 4 =$  \_\_\_\_\_ (13)  $17 - 8 =$  \_\_\_\_\_

(9)  $8 + 7 =$  \_\_\_\_\_ (14)  $18 - 6 =$  \_\_\_\_\_

(15)  $64 + 62 =$  \_\_\_\_\_

(16)  $27 + 34 + 26 =$  \_\_\_\_\_

Multiplying and dividing by 10.



(17)  $1 \times 10 =$  \_\_\_\_\_ (22)  $50 \div 10 =$  \_\_\_\_\_

(18)  $10 \times 4 =$  \_\_\_\_\_ (23)  $20 \div 10 =$  \_\_\_\_\_

(19)  $6 \times 10 =$  \_\_\_\_\_ (24)  $70 \div 10 =$  \_\_\_\_\_

(20)  $10 \times$  \_\_\_\_\_  $= 90$  (25)  $30 \div 10 =$  \_\_\_\_\_

(21) \_\_\_\_\_  $\times 10 = 100$  (26)  $80 \div 10 =$  \_\_\_\_\_

- (1) Write in the missing numbers as you skip count in 5's.



5, \_\_\_\_\_, 15, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, 35, \_\_\_\_\_,  
45, 50, \_\_\_\_\_, 60, \_\_\_\_\_, \_\_\_\_\_, 75, \_\_\_\_\_

- (2) Skip counting in 3's, write the number that comes after ...

9, \_\_\_\_\_ 27, \_\_\_\_\_ 18, \_\_\_\_\_

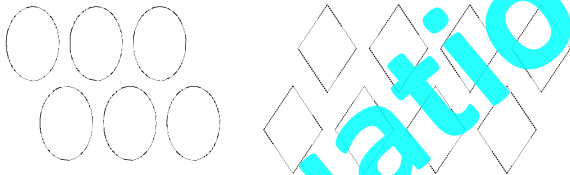
- (3) Write these numbers in order from smallest to largest. Underline the odd numbers.



601  
83  
584  
16  
609

\_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

- (4) Colour in  $\frac{1}{2}$  of each group of shapes.



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Add and subtract these numbers.

(5)  $11 + 7 =$  \_\_\_\_\_ (10)  $15 - 4 =$  \_\_\_\_\_

(6)  $6 + 4 =$  \_\_\_\_\_ (11)  $10 - 6 =$  \_\_\_\_\_

(7)  $5 + 7 =$  \_\_\_\_\_ (12)  $13 - 7 =$  \_\_\_\_\_

(8)  $9 + 8 =$  \_\_\_\_\_ (13)  $19 - 8 =$  \_\_\_\_\_

(9)  $12 + 6 =$  \_\_\_\_\_ (14)  $16 - 9 =$  \_\_\_\_\_

(15)  $91 + 45 + 39 =$  \_\_\_\_\_

(16)  $76 + 42 =$  \_\_\_\_\_

Multiplying and dividing by 5.



(17)  $1 \times 5 =$  \_\_\_\_\_ (22)  $25 \div 5 =$  \_\_\_\_\_

(18)  $5 \times 4 =$  \_\_\_\_\_ (23)  $10 \div 5 =$  \_\_\_\_\_

(19)  $6 \times 5 =$  \_\_\_\_\_ (24)  $35 \div 5 =$  \_\_\_\_\_

(20)  $5 \times$  \_\_\_\_\_ = 45 (25)  $15 \div 5 =$  \_\_\_\_\_

(21) \_\_\_\_\_  $\times 5 = 50$  (26)  $40 \div 5 =$  \_\_\_\_\_

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- (1) Write in the missing numbers as you skip count in 3's.



\_\_\_\_\_, 6, \_\_\_\_\_, \_\_\_\_\_, 15, 18, \_\_\_\_\_, 24, \_\_\_\_\_,  
\_\_\_\_\_, 30, \_\_\_\_\_, 36, \_\_\_\_\_, \_\_\_\_\_, 45, 48

- (2) Skip counting in 2's, write the number that comes before ...

\_\_\_\_\_, 10 \_\_\_\_\_, 16 \_\_\_\_\_, 8

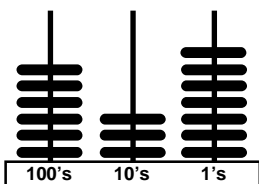
- (3) Write these numbers in order from largest to smallest. Underline the even numbers.



61  
853  
54  
166  
99

\_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

- (4) What number is shown on this abacus?



100's = \_\_\_\_\_

10's = \_\_\_\_\_

1's = \_\_\_\_\_

Number = \_\_\_\_\_

Add and subtract these numbers.

(5)  $11 + 4 =$  \_\_\_\_\_ (10)  $16 - 5 =$  \_\_\_\_\_

(6)  $4 + 6 =$  \_\_\_\_\_ (11)  $10 - 8 =$  \_\_\_\_\_

(7)  $6 + 7 =$  \_\_\_\_\_ (12)  $14 - 6 =$  \_\_\_\_\_

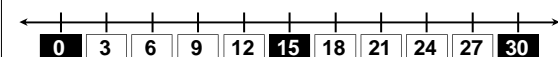
(8)  $11 + 8 =$  \_\_\_\_\_ (13)  $16 - 8 =$  \_\_\_\_\_

(9)  $7 + 9 =$  \_\_\_\_\_ (14)  $18 - 3 =$  \_\_\_\_\_

(15)  $63 + 75 =$  \_\_\_\_\_

(16)  $72 + 34 + 48 =$  \_\_\_\_\_

Multiplying and dividing by 3.



(17)  $3 \times 5 =$  \_\_\_\_\_ (22)  $3 \div 3 =$  \_\_\_\_\_

(18)  $2 \times 3 =$  \_\_\_\_\_ (23)  $12 \div 3 =$  \_\_\_\_\_

(19)  $3 \times 7 =$  \_\_\_\_\_ (24)  $18 \div 3 =$  \_\_\_\_\_

(20) \_\_\_\_\_  $\times 3 = 9$  (25)  $27 \div 3 =$  \_\_\_\_\_

(21)  $3 \times$  \_\_\_\_\_ = 24 (26)  $30 \div 3 =$  \_\_\_\_\_

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- (1) Write in the missing numbers as you skip count in 4's.



4, 8, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, 24, \_\_\_\_\_, \_\_\_\_\_,  
36, \_\_\_\_\_, \_\_\_\_\_, 48, \_\_\_\_\_, \_\_\_\_\_, 60, 64

- (2) Skip counting in 6's, write the number that is between ...

18 \_\_\_\_\_ 30, 36 \_\_\_\_\_ 48, 66 \_\_\_\_\_ 78

- (3) Write these numbers in order from smallest to largest. Underline the odd numbers.



923  
47  
244  
36  
575

\_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

- (4) If Rangi has 8 blue and 7 green marbles, how many marbles does he have altogether?



\_\_\_\_\_ + \_\_\_\_\_ = 10 + \_\_\_\_\_ = \_\_\_\_\_

Add and subtract these numbers.

(5)  $13 + 3 =$  \_\_\_\_\_ (10)  $16 - 2 =$  \_\_\_\_\_

(6)  $13 + 4 =$  \_\_\_\_\_ (11)  $19 - 8 =$  \_\_\_\_\_

(7)  $9 + 2 =$  \_\_\_\_\_ (12)  $11 - 4 =$  \_\_\_\_\_

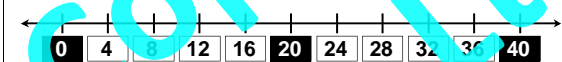
(8)  $6 + 9 =$  \_\_\_\_\_ (13)  $19 - 6 =$  \_\_\_\_\_

(9)  $15 + 2 =$  \_\_\_\_\_ (14)  $13 - 4 =$  \_\_\_\_\_

(15)  $49 + 21 + 17 =$  \_\_\_\_\_

(16)  $63 + 82 =$  \_\_\_\_\_

Skip counting in 4's and multiplying.



(17)  $4 \times 5 =$  \_\_\_\_\_ (22)  $1 \times 4 =$  \_\_\_\_\_

(18)  $2 \times 4 =$  \_\_\_\_\_ (23)  $4 \times 4 =$  \_\_\_\_\_

(19)  $4 \times 7 =$  \_\_\_\_\_ (24)  $6 \times 4 =$  \_\_\_\_\_

(20)  $3 \times 4 =$  \_\_\_\_\_ (25)  $4 \times 9 =$  \_\_\_\_\_

(21)  $4 \times 8 =$  \_\_\_\_\_ (26)  $10 \times 4 =$  \_\_\_\_\_

- (1) Write in the missing numbers as you skip count in 6's.



6, \_\_\_\_\_, 18, \_\_\_\_\_, \_\_\_\_\_, 36, \_\_\_\_\_, 48, \_\_\_\_\_,  
\_\_\_\_\_, \_\_\_\_\_, 66, \_\_\_\_\_, \_\_\_\_\_, 84, 90

- (2) Skip counting in 4's, write the number that comes after ...

20 \_\_\_\_\_ 36 \_\_\_\_\_ 12, \_\_\_\_\_

- (3) Write these decimal numbers in order from largest to smallest.



9.8  
4.35  
6.8  
3.73  
8.4

\_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

- (4) Write these number words as numerals.

forty-three \_\_\_\_\_ eighteen \_\_\_\_\_  
eighty-one \_\_\_\_\_ thirty-four \_\_\_\_\_  
seven hundred and fifty \_\_\_\_\_

Add and subtract these numbers.

(5)  $14 + 2 =$  \_\_\_\_\_ (10)  $17 - 3 =$  \_\_\_\_\_

(6)  $11 + 8 =$  \_\_\_\_\_ (11)  $19 - 7 =$  \_\_\_\_\_

(7)  $7 + 4 =$  \_\_\_\_\_ (12)  $11 - 5 =$  \_\_\_\_\_

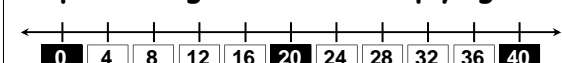
(8)  $13 + 6 =$  \_\_\_\_\_ (13)  $14 - 7 =$  \_\_\_\_\_

(9)  $9 + 4 =$  \_\_\_\_\_ (14)  $18 - 2 =$  \_\_\_\_\_

(15)  $83 + 46 =$  \_\_\_\_\_

(16)  $14 + 33 + 87 =$  \_\_\_\_\_

Skip counting in 4's and multiplying.



(17)  $1 \times 4 =$  \_\_\_\_\_ (22)  $4 \times 5 =$  \_\_\_\_\_

(18)  $4 \times 4 =$  \_\_\_\_\_ (23)  $2 \times 4 =$  \_\_\_\_\_

(19)  $6 \times 4 =$  \_\_\_\_\_ (24)  $4 \times 7 =$  \_\_\_\_\_

(20)  $4 \times 9 =$  \_\_\_\_\_ (25)  $3 \times 4 =$  \_\_\_\_\_

(21)  $10 \times 4 =$  \_\_\_\_\_ (26)  $4 \times 8 =$  \_\_\_\_\_

- (1) Write in the missing numbers as you skip count backwards in 4's.



56, \_\_\_\_\_, 48, \_\_\_\_\_, 40, \_\_\_\_\_, \_\_\_\_\_, 28,  
\_\_\_\_\_, \_\_\_\_\_, 16, \_\_\_\_\_, \_\_\_\_\_, 4

- (2) Skip counting in 6's, write the number that comes before ...

\_\_\_\_\_, 54      \_\_\_\_\_, 90      \_\_\_\_\_, 30

- (3) Write these numbers in order from smallest to largest. Underline the odd numbers.



338  
64  
217  
21  
686

\_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

- (4) Round these numbers to the nearest 10's.



673 = \_\_\_\_\_      944 = \_\_\_\_\_

539 = \_\_\_\_\_      635 = \_\_\_\_\_

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Add and subtract these numbers.

(5)  $14 + 3 =$  \_\_\_\_\_ (10)  $15 - 2 =$  \_\_\_\_\_

(6)  $12 + 7 =$  \_\_\_\_\_ (11)  $20 - 9 =$  \_\_\_\_\_

(7)  $6 + 5 =$  \_\_\_\_\_ (12)  $11 - 3 =$  \_\_\_\_\_

(8) \_\_\_\_\_ + 7 = 14 (13)  $19 -$  \_\_\_\_\_ = 14

(9)  $16 +$  \_\_\_\_\_ = 18 (14) \_\_\_\_\_ - 6 = 9

(15)  $54 + 18 + 46 =$  \_\_\_\_\_ = \_\_\_\_\_

(16)  $45 + 82 =$  \_\_\_\_\_ = \_\_\_\_\_

Skip counting in 4's and multiplying.



(17) \_\_\_\_\_ x 4 = 20 (22)  $4 \times$  \_\_\_\_\_ = 4

(18)  $4 \times$  \_\_\_\_\_ = 8 (23) \_\_\_\_\_ x 4 = 16

(19) \_\_\_\_\_ x 4 = 28 (24)  $4 \times$  \_\_\_\_\_ = 24

(20)  $4 \times$  \_\_\_\_\_ = 12 (25) \_\_\_\_\_ x 4 = 36

(21) \_\_\_\_\_ x 4 = 32 (26)  $4 \times$  \_\_\_\_\_ = 40

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- (1) Write in the missing numbers as you skip count in 6's.



\_\_\_\_\_, 12, \_\_\_\_\_, \_\_\_\_\_, 30, 36, \_\_\_\_\_, 48,  
54, \_\_\_\_\_, \_\_\_\_\_, 78, \_\_\_\_\_, 90

- (2) Skip counting in 4's, write the number that is between ...

24 \_\_\_\_\_ 32, 44 \_\_\_\_\_ 52, 16 \_\_\_\_\_ 24

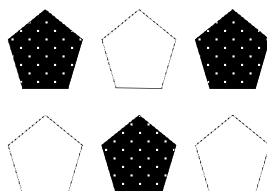
- (3) Write these decimal numbers in order from largest to smallest.



9.3  
53.1  
12.4  
1.66  
2.5

\_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

- (4) What fraction of these shapes is shaded,  $\frac{1}{2}$  or  $\frac{1}{4}$ ?



\_\_\_\_\_

Add and subtract these numbers.

(5)  $13 + 2 =$  \_\_\_\_\_ (10)  $16 - 3 =$  \_\_\_\_\_

(6)  $11 + 9 =$  \_\_\_\_\_ (11)  $17 - 4 =$  \_\_\_\_\_

(7)  $8 + 3 =$  \_\_\_\_\_ (12)  $11 - 2 =$  \_\_\_\_\_

(8) \_\_\_\_\_ + 5 = 19 (13)  $15 -$  \_\_\_\_\_ = 6

(9)  $9 +$  \_\_\_\_\_ = 15 (14) \_\_\_\_\_ - 2 = 15

(15)  $72 + 67 =$  \_\_\_\_\_ = \_\_\_\_\_

(16)  $58 + 62 + 34 =$  \_\_\_\_\_ = \_\_\_\_\_

Skip counting in 4's and multiplying.



(17) \_\_\_\_\_ x 4 = 4 (22)  $4 \times$  \_\_\_\_\_ = 20

(18)  $4 \times$  \_\_\_\_\_ = 16 (23) \_\_\_\_\_ x 4 = 8

(19) \_\_\_\_\_ x 4 = 24 (24)  $4 \times$  \_\_\_\_\_ = 28

(20)  $4 \times$  \_\_\_\_\_ = 36 (25) \_\_\_\_\_ x 4 = 12

(21) \_\_\_\_\_ x 4 = 40 (26)  $4 \times$  \_\_\_\_\_ = 32

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- (1) Write in the missing numbers as you skip count in 4's.



4, \_\_\_\_\_, \_\_\_\_\_, 16, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, 32, \_\_\_\_\_  
36, \_\_\_\_\_, 44, \_\_\_\_\_, \_\_\_\_\_, 56, \_\_\_\_\_

- (2) Skip counting in 6's, write the number that comes after ...

42, \_\_\_\_\_ 18, \_\_\_\_\_ 54, \_\_\_\_\_

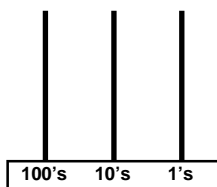
- (3) Write these numbers in order from smallest to largest. Underline the odd numbers.



824  
38  
945  
70  
270

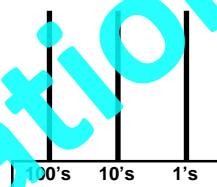
\_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

- (4) Draw these numbers on each abacus.



← 637

403 →



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Add and subtract these numbers.

(5)  $13 + 3 = \underline{\quad}$  (10)  $16 - 2 = \underline{\quad}$

(6)  $13 + 4 = \underline{\quad}$  (11)  $19 - 8 = \underline{\quad}$

(7)  $9 + 2 = \underline{\quad}$  (12)  $11 - 4 = \underline{\quad}$

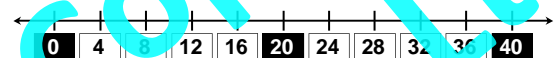
(8)  $\underline{\quad} + 9 = 15$  (13)  $19 - \underline{\quad} = 13$

(9)  $15 + \underline{\quad} = 17$  (14)  $\underline{\quad} - 4 = 9$

(15)  $46 + 27 + 93 = \underline{\quad}$

(16)  $73 + 54 = \underline{\quad}$

Multiplying and dividing by 4



(17)  $4 \times 5 = \underline{\quad}$  (22)  $4 \div 4 = \underline{\quad}$

(18)  $2 \times 4 = \underline{\quad}$  (23)  $16 \div 4 = \underline{\quad}$

(19)  $4 \times 7 = \underline{\quad}$  (24)  $24 \div 4 = \underline{\quad}$

(20)  $\underline{\quad} \times 4 = 12$  (25)  $36 \div 4 = \underline{\quad}$

(21)  $4 \times \underline{\quad} = 32$  (26)  $40 \div 4 = \underline{\quad}$

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- (1) Write in the missing numbers as you skip count backwards in 6's.



84, 78, \_\_\_\_\_, 66, \_\_\_\_\_, \_\_\_\_\_, 48, \_\_\_\_\_  
\_\_\_\_\_, 30, \_\_\_\_\_, 12, \_\_\_\_\_

- (2) Skip counting in 4's, write the number that comes before ...

\_\_\_\_\_, 36 \_\_\_\_\_, 12 \_\_\_\_\_, 28

- (3) Write these decimal numbers in order from largest to smallest.



8.8  
3.35  
5.8  
2.73  
7.4

\_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

- (4) In Room 7 there are 9 boys and 9 girls. How many children are there altogether?



\_\_\_\_\_ + \_\_\_\_\_ = 10 + \_\_\_\_\_ = \_\_\_\_\_

Add and subtract these numbers.

(5)  $14 + 2 = \underline{\quad}$  (10)  $17 - 3 = \underline{\quad}$

(6)  $11 + 8 = \underline{\quad}$  (11)  $19 - 7 = \underline{\quad}$

(7)  $7 + 4 = \underline{\quad}$  (12)  $11 - 5 = \underline{\quad}$

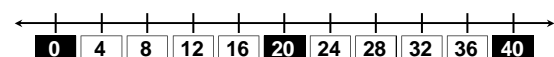
(8)  $\underline{\quad} + 6 = 19$  (13)  $14 - \underline{\quad} = 7$

(9)  $9 + \underline{\quad} = 13$  (14)  $\underline{\quad} - 2 = 16$

(15)  $52 + 93 = \underline{\quad}$

(16)  $65 + 45 + 18 = \underline{\quad}$

Multiplying and dividing by 4.



(17)  $1 \times 4 = \underline{\quad}$  (22)  $20 \div 4 = \underline{\quad}$

(18)  $4 \times 4 = \underline{\quad}$  (23)  $8 \div 4 = \underline{\quad}$

(19)  $6 \times 4 = \underline{\quad}$  (24)  $28 \div 4 = \underline{\quad}$

(20)  $4 \times \underline{\quad} = 36$  (25)  $12 \div 4 = \underline{\quad}$

(21)  $\underline{\quad} \times 4 = 40$  (26)  $32 \div 4 = \underline{\quad}$

# Number Knowledge Progress Assessment 1

Practical / oral assessment: **Ask** each question as outlined below. **Record** the results by circling yes or no

	Practical / Oral Questions (Supply your child with some paper)	Result (circle)																																																																																								
1	<b>Skip counting</b> in <b>3's, 4's, 5's</b> and <b>6's</b> , ask your child to <b>recite</b> a <b>forward</b> and <b>backward</b> sequence of at least the first <b>10 multiples</b> for each number.	yes / no																																																																																								
2	<b>Skip counting</b> in <b>3's, 4's, 5's</b> and <b>6's</b> , ask your child to <b>write</b> a <b>forward</b> and <b>backward</b> sequence of at least the first <b>10 multiples</b> for each number.	yes / no																																																																																								
3	<b>Write 5 decimal numbers</b> in a mixed order. Ask your child to <b>rewrite</b> these decimal numbers in <b>order</b> from <b>smallest</b> to <b>largest</b> or <b>largest</b> to <b>smallest</b> . Repeat with up to 10 different numerals.	yes / no																																																																																								
4	<b>Write</b> up to <b>10</b> 2 or 3 digit numbers and ask your child to <b>round</b> each number to the <b>nearest 10</b> or <b>100</b> .	yes / no																																																																																								
5	<b>Numeracy facts up to 10.</b> Model each <b>addition</b> and <b>subtraction</b> problem, if required. Tick each correct answer.	yes / no																																																																																								
	<table border="1"> <thead> <tr> <th></th> <th>✓</th> <th></th> <th>✓</th> <th></th> <th>✓</th> <th></th> <th>✓</th> </tr> </thead> <tbody> <tr> <td>18 - 3 = 15</td> <td></td> <td>11 + 3 = 14</td> <td></td> <td>14 - 2 = 12</td> <td></td> <td>13 + 4 = 17</td> <td></td> </tr> <tr> <td>2 + 17 = 19</td> <td></td> <td>15 - 2 = 13</td> <td></td> <td>7 + 11 = 18</td> <td></td> <td>20 - 9 = 11</td> <td></td> </tr> <tr> <td>13 - 2 = 11</td> <td></td> <td>2 + 14 = 16</td> <td></td> <td>19 - 6 = 13</td> <td></td> <td>4 + 15 = 19</td> <td></td> </tr> <tr> <td>14 + 1 = 15</td> <td></td> <td>18 - 2 = 16</td> <td></td> <td>14 + 4 = 18</td> <td></td> <td>17 - 2 = 15</td> <td></td> </tr> <tr> <td>20 - 6 = 14</td> <td></td> <td>13 + 7 = 20</td> <td></td> <td>19 - 8 = 11</td> <td></td> <td>18 + 2 = 20</td> <td></td> </tr> <tr> <td>3 + 13 = 16</td> <td></td> <td>17 - 6 = 11</td> <td></td> <td>5 + 15 = 20</td> <td></td> <td>16 - 5 = 11</td> <td></td> </tr> </tbody> </table>		✓		✓		✓		✓	18 - 3 = 15		11 + 3 = 14		14 - 2 = 12		13 + 4 = 17		2 + 17 = 19		15 - 2 = 13		7 + 11 = 18		20 - 9 = 11		13 - 2 = 11		2 + 14 = 16		19 - 6 = 13		4 + 15 = 19		14 + 1 = 15		18 - 2 = 16		14 + 4 = 18		17 - 2 = 15		20 - 6 = 14		13 + 7 = 20		19 - 8 = 11		18 + 2 = 20		3 + 13 = 16		17 - 6 = 11		5 + 15 = 20		16 - 5 = 11																																		
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6	<b>Numeracy facts 11 to 18.</b> Model each <b>addition</b> and <b>subtraction</b> problem, if required. Tick each correct answer.	yes / no																																																																																								
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18 - 9 = 9		14 - 6 = 8		16 - 8 = 8		15 - 6 = 9																																																																																				
7	<b>3x, 4x, 5x &amp; 10x multiplication facts.</b> Ask these multiplication facts either of two ways, such as ... "What does two multiplied by four equal?" or "What number multiplied by 2 gives you an answer of 8?"	yes / no																																																																																								
	<table border="1"> <thead> <tr> <th></th> <th>✓</th> <th></th> <th>✓</th> <th></th> <th>✓</th> <th></th> <th>✓</th> </tr> </thead> <tbody> <tr> <td>3 x 9 = 27</td> <td></td> <td>4 x 10 = 40</td> <td></td> <td>5 x 6 = 30</td> <td></td> <td>9 x 4 = 36</td> <td></td> </tr> <tr> <td>2 x 4 = 8</td> <td></td> <td>3 x 7 = 21</td> <td></td> <td>8 x 10 = 80</td> <td></td> <td>5 x 8 = 40</td> <td></td> </tr> <tr> <td>5 x 4 = 20</td> <td></td> <td>8 x 4 = 32</td> <td></td> <td>3 x 4 = 12</td> <td></td> <td>3 x 10 = 30</td> <td></td> </tr> <tr> <td>7 x 10 = 70</td> <td></td> <td>5 x 3 = 15</td> <td></td> <td>7 x 4 = 28</td> <td></td> <td>10 x 2 = 20</td> <td></td> </tr> <tr> <td>3 x 6 = 18</td> <td></td> <td>10 x 10 = 100</td> <td></td> <td>5 x 10 = 50</td> <td></td> <td>5 x 5 = 25</td> <td></td> </tr> <tr> <td>4 x 4 = 16</td> <td></td> <td>3 x 8 = 24</td> <td></td> <td>6 x 10 = 60</td> <td></td> <td>9 x 10 = 90</td> <td></td> </tr> <tr> <td>5 x 9 = 45</td> <td></td> <td>6 x 4 = 24</td> <td></td> <td>3 x 5 = 15</td> <td></td> <td>5 x 7 = 35</td> <td></td> </tr> </tbody> </table>		✓		✓		✓		✓	3 x 9 = 27		4 x 10 = 40		5 x 6 = 30		9 x 4 = 36		2 x 4 = 8		3 x 7 = 21		8 x 10 = 80		5 x 8 = 40		5 x 4 = 20		8 x 4 = 32		3 x 4 = 12		3 x 10 = 30		7 x 10 = 70		5 x 3 = 15		7 x 4 = 28		10 x 2 = 20		3 x 6 = 18		10 x 10 = 100		5 x 10 = 50		5 x 5 = 25		4 x 4 = 16		3 x 8 = 24		6 x 10 = 60		9 x 10 = 90		5 x 9 = 45		6 x 4 = 24		3 x 5 = 15		5 x 7 = 35																										
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Number Knowledge - the key to success!



- (1) Write in the missing numbers as you skip count backwards in 2's.



30, \_\_\_\_\_, \_\_\_\_\_, 24, \_\_\_\_\_, \_\_\_\_\_, 18,

\_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, 10, 8, \_\_\_\_\_, \_\_\_\_\_, 2

- (2) Skip counting in 10's, write the number that is between ...

90 \_\_\_\_\_ 110, 40 \_\_\_\_\_ 60, 70 \_\_\_\_\_ 90

- (3) Write these decimal numbers in order from smallest to largest.



2.01

35.3

9.84

46.6

5.09

\_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

- (4) Write these number words as numerals.

sixty-eight \_\_\_\_\_ ninety-seven \_\_\_\_\_

seventy-nine \_\_\_\_\_ eighty-six \_\_\_\_\_

four hundred and twenty-five \_\_\_\_\_

Add and subtract these numbers.

(5)  $4 + 23 =$  \_\_\_\_\_ (10)  $95 - 2 =$  \_\_\_\_\_

(6)  $42 + 7 =$  \_\_\_\_\_ (11)  $70 - 9 =$  \_\_\_\_\_

(7)  $6 + 15 =$  \_\_\_\_\_ (12)  $11 - 3 =$  \_\_\_\_\_

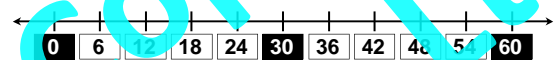
(8) \_\_\_\_\_ + 7 = 84 (13)  $59 -$  \_\_\_\_\_ = 54

(9)  $36 +$  \_\_\_\_\_ = 38 (14) \_\_\_\_\_ - 6 = 69

(15)  $52 + 17 + 68 =$  \_\_\_\_\_ = \_\_\_\_\_

(16)  $54 + 83 =$  \_\_\_\_\_ = \_\_\_\_\_

Skip counting in 5's and multiplying.



(17)  $6 \times 5 =$  \_\_\_\_\_ (22)  $1 \times 6 =$  \_\_\_\_\_

(18)  $2 \times 6 =$  \_\_\_\_\_ (23)  $6 \times 4 =$  \_\_\_\_\_

(19)  $6 \times 7 =$  \_\_\_\_\_ (24)  $6 \times 6 =$  \_\_\_\_\_

(20)  $3 \times 6 =$  \_\_\_\_\_ (25)  $6 \times 9 =$  \_\_\_\_\_

(21)  $6 \times 8 =$  \_\_\_\_\_ (26)  $10 \times 6 =$  \_\_\_\_\_

- (1) Write in the missing numbers as you skip count in 10's.



10, \_\_\_\_\_, \_\_\_\_\_, 40, \_\_\_\_\_, 60, \_\_\_\_\_

\_\_\_\_\_, 90, \_\_\_\_\_, \_\_\_\_\_, 120, \_\_\_\_\_, 140

- (2) Skip counting in 5's, write the number that comes after ...

55, \_\_\_\_\_ 20, \_\_\_\_\_ 35, \_\_\_\_\_

- (3) What is the place value of the BOLD digit in this number and what does it mean?

Place value

means

**3**40

\_\_\_\_\_

- (4) Round these numbers to the nearest 100's.



576 = \_\_\_\_\_ 828 = \_\_\_\_\_

949 = \_\_\_\_\_ 354 = \_\_\_\_\_

Add and subtract these numbers.

(5)  $93 + 2 =$  \_\_\_\_\_ (10)  $26 - 3 =$  \_\_\_\_\_

(6)  $11 + 79 =$  \_\_\_\_\_ (11)  $47 - 4 =$  \_\_\_\_\_

(7)  $18 + 3 =$  \_\_\_\_\_ (12)  $11 - 2 =$  \_\_\_\_\_

(8) \_\_\_\_\_ + 5 = 59 (13)  $85 -$  \_\_\_\_\_ = 76

(9)  $9 +$  \_\_\_\_\_ = 65 (14) \_\_\_\_\_ - 2 = 35

(15)  $77 + 81 =$  \_\_\_\_\_ = \_\_\_\_\_

(16)  $54 + 27 + 63 =$  \_\_\_\_\_ = \_\_\_\_\_

Skip counting in 6's and multiplying.



(17)  $1 \times 6 =$  \_\_\_\_\_ (22)  $6 \times 5 =$  \_\_\_\_\_

(18)  $6 \times 4 =$  \_\_\_\_\_ (23)  $2 \times 6 =$  \_\_\_\_\_

(19)  $6 \times 6 =$  \_\_\_\_\_ (24)  $6 \times 7 =$  \_\_\_\_\_

(20)  $6 \times 9 =$  \_\_\_\_\_ (25)  $3 \times 6 =$  \_\_\_\_\_

(21)  $10 \times 6 =$  \_\_\_\_\_ (26)  $6 \times 8 =$  \_\_\_\_\_

- (1) Write in the missing numbers as you skip count backwards in 5's.



80, \_\_\_\_\_, 70, \_\_\_\_\_, 60, \_\_\_\_\_, \_\_\_\_\_, 45,  
\_\_\_\_\_, 35, \_\_\_\_\_, \_\_\_\_\_, 20, \_\_\_\_\_, \_\_\_\_\_, 5

- (2) Skip counting in 3's, write the number that comes before ...

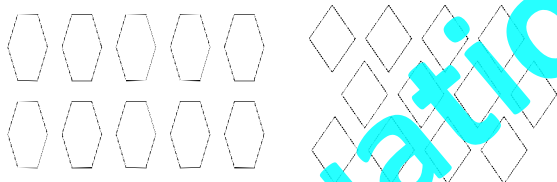
\_\_\_\_\_, 24      \_\_\_\_\_, 33      \_\_\_\_\_, 18

- (3) Round each number to the nearest \$10, then work out an estimated answer.

$$\$86 + \$34 = \underline{\hspace{2cm}} + \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

$$\$98 - \$51 = \underline{\hspace{2cm}} - \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

- (4) Colour in  $\frac{1}{2}$  of each group of shapes.



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Add and subtract these numbers.

(5)  $1 + 95 = \underline{\hspace{2cm}}$  (10)  $35 - 3 = \underline{\hspace{2cm}}$

(6)  $12 + 8 = \underline{\hspace{2cm}}$  (11)  $60 - 7 = \underline{\hspace{2cm}}$

(7)  $8 + 86 = \underline{\hspace{2cm}}$  (12)  $42 - 3 = \underline{\hspace{2cm}}$

(8)  $\underline{\hspace{2cm}} + 8 = 26$  (13)  $28 - \underline{\hspace{2cm}} = 24$

(9)  $75 + \underline{\hspace{2cm}} = 78$  (14)  $\underline{\hspace{2cm}} - 7 = 58$

(15)  $51 + 49 + 27 = \underline{\hspace{2cm}}$

(16)  $71 + 76 = \underline{\hspace{2cm}}$

Skip counting in 6's and multiplying.



(17)  $\underline{\hspace{2cm}} \times 6 = 30$  (22)  $6 \times \underline{\hspace{2cm}} = 6$

(18)  $6 \times \underline{\hspace{2cm}} = 12$  (23)  $\underline{\hspace{2cm}} \times 6 = 24$

(19)  $\underline{\hspace{2cm}} \times 6 = 42$  (24)  $6 \times \underline{\hspace{2cm}} = 36$

(20)  $6 \times \underline{\hspace{2cm}} = 18$  (25)  $\underline{\hspace{2cm}} \times 6 = 54$

(21)  $\underline{\hspace{2cm}} \times 6 = 48$  (26)  $6 \times \underline{\hspace{2cm}} = 60$

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- (1) Write in the missing numbers as you skip count in 3's.



3, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, 15, \_\_\_\_\_, \_\_\_\_\_, 24,  
27, \_\_\_\_\_, \_\_\_\_\_, 36, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

- (2) Skip counting in 4's, write the number that is between ...

20 \_\_\_\_\_ 28, 12 \_\_\_\_\_ 20, 36 \_\_\_\_\_ 44

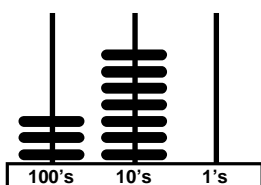
- (3) Work out what number goes where the letters are, i.e. solve these equations.

$$87 + a = 129 \quad a = \underline{\hspace{2cm}}$$

$$b + 54 = 146 \quad b = \underline{\hspace{2cm}}$$



- (4) What number is shown on this abacus?



100's = \_\_\_\_\_

10's = \_\_\_\_\_

1's = \_\_\_\_\_

Number = \_\_\_\_\_

Add and subtract these numbers.

(5)  $32 + 3 = \underline{\hspace{2cm}}$  (10)  $98 - 7 = \underline{\hspace{2cm}}$

(6)  $3 + 67 = \underline{\hspace{2cm}}$  (11)  $10 - 4 = \underline{\hspace{2cm}}$

(7)  $49 + 3 = \underline{\hspace{2cm}}$  (12)  $82 - 7 = \underline{\hspace{2cm}}$

(8)  $\underline{\hspace{2cm}} + 4 = 28$  (13)  $37 - \underline{\hspace{2cm}} = 29$

(9)  $48 + \underline{\hspace{2cm}} = 55$  (14)  $\underline{\hspace{2cm}} - 6 = 72$

(15)  $62 + 95 = \underline{\hspace{2cm}}$

(16)  $23 + 65 + 55 = \underline{\hspace{2cm}}$

Skip counting in 6's and multiplying.



(17)  $\underline{\hspace{2cm}} \times 6 = 6$  (22)  $6 \times \underline{\hspace{2cm}} = 30$

(18)  $6 \times \underline{\hspace{2cm}} = 24$  (23)  $\underline{\hspace{2cm}} \times 6 = 12$

(19)  $\underline{\hspace{2cm}} \times 6 = 36$  (24)  $6 \times \underline{\hspace{2cm}} = 42$

(20)  $6 \times \underline{\hspace{2cm}} = 54$  (25)  $\underline{\hspace{2cm}} \times 6 = 18$

(21)  $\underline{\hspace{2cm}} \times 6 = 60$  (26)  $6 \times \underline{\hspace{2cm}} = 48$

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- (1) Write in the missing numbers as you skip count backwards in 4's.



64, 60, \_\_\_\_\_, 52, \_\_\_\_\_, 44, \_\_\_\_\_, \_\_\_\_\_,  
32, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, 16, \_\_\_\_\_, \_\_\_\_\_, 4

- (2) Skip counting in 6's, write the number that comes after ...

30, \_\_\_\_\_ 18, \_\_\_\_\_ 54, \_\_\_\_\_

- (3) Rename these numbers into 100's, 10's and 1's.



382 =  100's +  10's +  1's

650 =  100's +  10's +  1's

- (4) Oscar has 2 cats, 6 mice and 4 goldfish as pets. How many pets does Oscar have?



\_\_\_\_\_ + \_\_\_\_\_ + \_\_\_\_\_ = 10 + \_\_\_\_\_ = \_\_\_\_\_

Add and subtract these numbers.

(5)  $1 + 87 = \underline{\hspace{2cm}}$  (10)  $45 - 4 = \underline{\hspace{2cm}}$

(6)  $26 + 4 = \underline{\hspace{2cm}}$  (11)  $70 - 6 = \underline{\hspace{2cm}}$

(7)  $5 + 57 = \underline{\hspace{2cm}}$  (12)  $13 - 7 = \underline{\hspace{2cm}}$

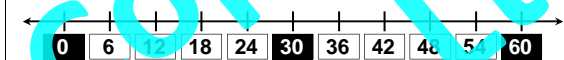
(8)  $\underline{\hspace{2cm}} + 8 = 37$  (13)  $39 - \underline{\hspace{2cm}} = 31$

(9)  $92 + \underline{\hspace{2cm}} = 98$  (14)  $\underline{\hspace{2cm}} - 9 = 67$

(15)  $63 + 18 + 57 = \underline{\hspace{2cm}}$

(16)  $82 + 76 = \underline{\hspace{2cm}}$

Multiplying and dividing by 6



(17)  $6 \times 5 = \underline{\hspace{2cm}}$  (22)  $6 \div 6 = \underline{\hspace{2cm}}$

(18)  $2 \times 6 = \underline{\hspace{2cm}}$  (23)  $24 \div 6 = \underline{\hspace{2cm}}$

(19)  $6 \times 7 = \underline{\hspace{2cm}}$  (24)  $36 \div 6 = \underline{\hspace{2cm}}$

(20)  $\underline{\hspace{2cm}} \times 3 = 18$  (25)  $54 \div 6 = \underline{\hspace{2cm}}$

(21)  $6 \times \underline{\hspace{2cm}} = 48$  (26)  $60 \div 6 = \underline{\hspace{2cm}}$

- (1) Write in the missing numbers as you skip count in 6's.



6, 12, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, 36, \_\_\_\_\_, \_\_\_\_\_,  
54, \_\_\_\_\_, \_\_\_\_\_, 72, \_\_\_\_\_, \_\_\_\_\_, 90

- (2) Skip counting in 10's, write the number that comes before ...

\_\_\_\_\_, 80 \_\_\_\_\_, 120 \_\_\_\_\_, 50

- (3) Write these decimal numbers in order from largest to smallest.



8.71  
85.3  
8.94  
86.6  
8.03

- (4) Write these number words as numerals.

twenty-six \_\_\_\_\_ thirty-five \_\_\_\_\_

fifty-three \_\_\_\_\_ sixty-two \_\_\_\_\_

seven hundred and four \_\_\_\_\_

Add and subtract these numbers.

(5)  $41 + 4 = \underline{\hspace{2cm}}$  (10)  $86 - 5 = \underline{\hspace{2cm}}$

(6)  $4 + 76 = \underline{\hspace{2cm}}$  (11)  $20 - 8 = \underline{\hspace{2cm}}$

(7)  $16 + 7 = \underline{\hspace{2cm}}$  (12)  $54 - 6 = \underline{\hspace{2cm}}$

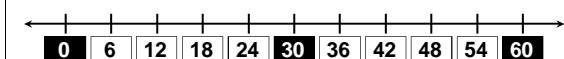
(8)  $\underline{\hspace{2cm}} + 8 = 39$  (13)  $36 - \underline{\hspace{2cm}} = 28$

(9)  $57 + \underline{\hspace{2cm}} = 66$  (14)  $\underline{\hspace{2cm}} - 3 = 95$

(15)  $72 + 94 = \underline{\hspace{2cm}}$

(16)  $19 + 68 + 42 = \underline{\hspace{2cm}}$

Multiplying and dividing by 6.



(17)  $1 \times 6 = \underline{\hspace{2cm}}$  (22)  $30 \div 6 = \underline{\hspace{2cm}}$

(18)  $6 \times 4 = \underline{\hspace{2cm}}$  (23)  $12 \div 6 = \underline{\hspace{2cm}}$

(19)  $6 \times 6 = \underline{\hspace{2cm}}$  (24)  $42 \div 6 = \underline{\hspace{2cm}}$

(20)  $6 \times \underline{\hspace{2cm}} = 54$  (25)  $18 \div 6 = \underline{\hspace{2cm}}$

(21)  $\underline{\hspace{2cm}} \times 6 = 60$  (26)  $48 \div 6 = \underline{\hspace{2cm}}$

- (1) Write in the missing numbers as you skip count in 2's.



2, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, 12, \_\_\_\_\_, 16,  
18, \_\_\_\_\_, \_\_\_\_\_, 24, \_\_\_\_\_, \_\_\_\_\_, 30, 32

- (2) Skip counting in 5's, write the number that is between ...

35 \_\_\_\_\_ 45, 80 \_\_\_\_\_ 90, 20 \_\_\_\_\_ 30

- (3) Rename these numbers into 100's, 10's and 1's.



206 =  100's +  10's +  1's

790 =  100's +  10's +  1's

- (4) Round these numbers to the nearest \$100.



\$863 = \_\_\_\_\_ \$637 = \_\_\_\_\_

\$783 = \_\_\_\_\_ \$950 = \_\_\_\_\_

Add and subtract these numbers.

(5)  $3 + 63 = \underline{\hspace{2cm}}$  (10)  $26 - 2 = \underline{\hspace{2cm}}$

(6)  $13 + 4 = \underline{\hspace{2cm}}$  (11)  $39 - 8 = \underline{\hspace{2cm}}$

(7)  $9 + 42 = \underline{\hspace{2cm}}$  (12)  $91 - 4 = \underline{\hspace{2cm}}$

(8)  $\underline{\hspace{2cm}} + 9 = 85$  (13)  $19 - \underline{\hspace{2cm}} = 13$

(9)  $75 + \underline{\hspace{2cm}} = 77$  (14)  $\underline{\hspace{2cm}} - 4 = 59$

(15)  $54 + 19 + 66 = \underline{\hspace{2cm}}$

(16)  $81 + 67 = \underline{\hspace{2cm}}$

Multiplying and dividing in 2's, 3's, 4's & 6's.

(17)  $2 \times 3 = \underline{\hspace{2cm}}$  (23)  $8 \div 2 = \underline{\hspace{2cm}}$

(18)  $6 \times 3 = \underline{\hspace{2cm}}$  (24)  $27 \div 3 = \underline{\hspace{2cm}}$

(19)  $4 \times 8 = \underline{\hspace{2cm}}$  (25)  $28 \div 4 = \underline{\hspace{2cm}}$

(20)  $5 \times 6 = \underline{\hspace{2cm}}$  (26)  $60 \div 6 = \underline{\hspace{2cm}}$

(21)  $2 \times \underline{\hspace{2cm}} = 10$  (27)  $16 \div \underline{\hspace{2cm}} = 4$

(22)  $\underline{\hspace{2cm}} \times 3 = 9$  (28)  $\underline{\hspace{2cm}} \div 6 = 6$

- (1) Write in the missing numbers as you skip count backwards in 10's.



140, \_\_\_\_\_, 120, \_\_\_\_\_, 100, \_\_\_\_\_, \_\_\_\_\_,  
\_\_\_\_\_, 60, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, 20, \_\_\_\_\_

- (2) Skip counting in 3's, write the number that comes after ...

27, \_\_\_\_\_ 15, \_\_\_\_\_ 36, \_\_\_\_\_

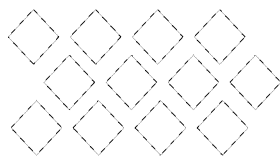
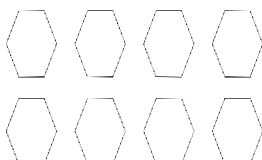
- (3) Round each number to the nearest \$10, then work out an estimated answer.

$\$68 \times 5 = \underline{\hspace{2cm}} \times 5 = \underline{\hspace{2cm}}$

$\$319 \div 4 = \underline{\hspace{2cm}} \div 4 = \underline{\hspace{2cm}}$



- (4) Colour in  $\frac{1}{4}$  of each group of shapes.



Add and subtract these numbers.

(5)  $24 + 2 = \underline{\hspace{2cm}}$  (10)  $67 - 3 = \underline{\hspace{2cm}}$

(6)  $11 + 38 = \underline{\hspace{2cm}}$  (11)  $19 - 7 = \underline{\hspace{2cm}}$

(7)  $17 + 4 = \underline{\hspace{2cm}}$  (12)  $41 - 5 = \underline{\hspace{2cm}}$

(8)  $\underline{\hspace{2cm}} + 6 = 99$  (13)  $84 - \underline{\hspace{2cm}} = 7$

(9)  $9 + \underline{\hspace{2cm}} = 53$  (14)  $\underline{\hspace{2cm}} - 2 = 76$

(15)  $94 + 55 = \underline{\hspace{2cm}}$

(16)  $53 + 49 + 61 = \underline{\hspace{2cm}}$

Multiplying and dividing in 2's, 3's, 4's & 6's.

(17)  $2 \times 4 = \underline{\hspace{2cm}}$  (23)  $10 \div 2 = \underline{\hspace{2cm}}$

(18)  $9 \times 3 = \underline{\hspace{2cm}}$  (24)  $9 \div 3 = \underline{\hspace{2cm}}$

(19)  $4 \times 7 = \underline{\hspace{2cm}}$  (25)  $16 \div 4 = \underline{\hspace{2cm}}$

(20)  $10 \times 6 = \underline{\hspace{2cm}}$  (26)  $36 \div 6 = \underline{\hspace{2cm}}$

(21)  $2 \times \underline{\hspace{2cm}} = 12$  (27)  $36 \div \underline{\hspace{2cm}} = 4$

(22)  $\underline{\hspace{2cm}} \times 3 = 24$  (28)  $\underline{\hspace{2cm}} \div 6 = 4$

- (1) Write in the missing numbers as you skip count in 5's.



5, \_\_\_\_\_, 15, \_\_\_\_\_, \_\_\_\_\_, 30, \_\_\_\_\_, 40,  
45, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, 65, \_\_\_\_\_, 75, 80

- (2) Skip counting in 4's, write the number that comes before ...

\_\_\_\_\_, 36      \_\_\_\_\_, 16      \_\_\_\_\_, 48

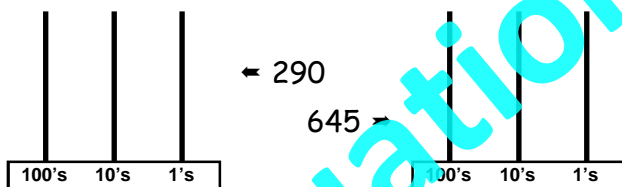
- (3) Work out what numbers go where the letters are, i.e. solve these equations.

$$6 \times h = 54 \quad h = \underline{\hspace{2cm}}$$

$$j \div 4 = 10 \quad j = \underline{\hspace{2cm}}$$



- (4) Draw these numbers on each abacus.



Add and subtract these numbers.

(5)  $4 + 83 = \underline{\hspace{2cm}}$  (10)  $55 - 2 = \underline{\hspace{2cm}}$

(6)  $12 + 7 = \underline{\hspace{2cm}}$  (11)  $20 - 9 = \underline{\hspace{2cm}}$

(7)  $6 + 45 = \underline{\hspace{2cm}}$  (12)  $61 - 3 = \underline{\hspace{2cm}}$

(8)  $\underline{\hspace{2cm}} + 7 = 74$  (13)  $99 - \underline{\hspace{2cm}} = 94$

(9)  $36 + \underline{\hspace{2cm}} = 38$  (14)  $\underline{\hspace{2cm}} - 6 = 39$

(15)  $96 + 24 + 37 = \underline{\hspace{2cm}}$

(16)  $56 + 71 = \underline{\hspace{2cm}}$

Multiplying and dividing in 2's, 3's, 4's & 6's.

(17)  $2 \times 5 = \underline{\hspace{2cm}}$  (23)  $12 \div 2 = \underline{\hspace{2cm}}$

(18)  $3 \times 3 = \underline{\hspace{2cm}}$  (24)  $24 \div 3 = \underline{\hspace{2cm}}$

(19)  $4 \times 4 = \underline{\hspace{2cm}}$  (25)  $36 \div 4 = \underline{\hspace{2cm}}$

(20)  $6 \times 6 = \underline{\hspace{2cm}}$  (26)  $24 \div 6 = \underline{\hspace{2cm}}$

(21)  $2 \times \underline{\hspace{2cm}} = 6$  (27)  $32 \div \underline{\hspace{2cm}} = 4$

(22)  $\underline{\hspace{2cm}} \times 3 = 18$  (28)  $\underline{\hspace{2cm}} \div 6 = 5$

- (1) Write in the missing numbers as you skip count backwards in 3's.



48, \_\_\_\_\_, 42, \_\_\_\_\_, 36, \_\_\_\_\_, 30, \_\_\_\_\_  
24, \_\_\_\_\_, 18, \_\_\_\_\_, 12, \_\_\_\_\_, 3

- (2) Skip counting in 6's, write the number that is between ...

36 \_\_\_\_\_ 48, 12 \_\_\_\_\_ 24, 30 \_\_\_\_\_ 42

- (3) What is the **place value** of the **BOLD** digit in this number and what does it means?

Place value      means  
**3**560      \_\_\_\_\_

- (4) Abbey has 2 dogs, 5 rabbits and 5 goldfish as pets. How many pets does Abbey have?



\_\_\_\_\_ + \_\_\_\_\_ + \_\_\_\_\_ = 10 + \_\_\_\_\_ = \_\_\_\_\_

Add and subtract these numbers.

(5)  $53 + 2 = \underline{\hspace{2cm}}$  (10)  $86 - 3 = \underline{\hspace{2cm}}$

(6)  $11 + 29 = \underline{\hspace{2cm}}$  (11)  $17 - 4 = \underline{\hspace{2cm}}$

(7)  $68 + 3 = \underline{\hspace{2cm}}$  (12)  $41 - 2 = \underline{\hspace{2cm}}$

(8)  $\underline{\hspace{2cm}} + 5 = 39$  (13)  $75 - \underline{\hspace{2cm}} = 66$

(9)  $89 + \underline{\hspace{2cm}} = 95$  (14)  $\underline{\hspace{2cm}} - 2 = 35$

(15)  $81 + 55 = \underline{\hspace{2cm}}$

(16)  $25 + 49 + 75 = \underline{\hspace{2cm}}$

Multiplying and dividing in 2's, 3's, 4's & 6's.

(17)  $2 \times 6 = \underline{\hspace{2cm}}$  (23)  $6 \div 2 = \underline{\hspace{2cm}}$

(18)  $8 \times 3 = \underline{\hspace{2cm}}$  (24)  $18 \div 3 = \underline{\hspace{2cm}}$

(19)  $4 \times 9 = \underline{\hspace{2cm}}$  (25)  $32 \div 4 = \underline{\hspace{2cm}}$

(20)  $4 \times 6 = \underline{\hspace{2cm}}$  (26)  $30 \div 6 = \underline{\hspace{2cm}}$

(21)  $2 \times \underline{\hspace{2cm}} = 8$  (27)  $28 \div \underline{\hspace{2cm}} = 4$

(22)  $\underline{\hspace{2cm}} \times 3 = 27$  (28)  $\underline{\hspace{2cm}} \div 6 = 10$



# Number Knowledge Progress Assessment 2

Practical / oral assessment: **Ask** each question as outlined below. **Record** the results by circling yes or no

	Practical / Oral Questions (Supply your child with some paper)	Result (circle)																																																																																								
1	<b>Skip counting</b> in <b>3's, 4's, 5's</b> and <b>6's</b> , ask your child to <b>recite</b> a <b>forward</b> and <b>backward</b> sequence of at least the first <b>10 multiples</b> for each number.	yes / no																																																																																								
2	<b>Skip counting</b> in <b>3's, 4's, 5's</b> and <b>6's</b> , ask your child to <b>write</b> a <b>forward</b> and <b>backward</b> sequence of at least the first <b>10 multiples</b> for each number.	yes / no																																																																																								
3	<b>Write 5 decimal numbers</b> in a mixed order. Ask your child to <b>rewrite</b> these decimal numbers in <b>order</b> from <b>smallest</b> to <b>largest</b> or <b>largest</b> to <b>smallest</b> . Repeat with up to 10 different numerals.	yes / no																																																																																								
4	<b>Write</b> up to <b>10</b> 2 or 3 digit numbers and ask your child to <b>round</b> each number to the <b>nearest 10</b> or <b>100</b> .	yes / no																																																																																								
5	<b>Numeracy facts up to 10.</b> Model each <b>addition</b> and <b>subtraction</b> problem, if required. Tick each correct answer.	yes / no																																																																																								
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Number Knowledge - the key to success!



- (1) Write in the missing numbers as you skip count in 4's.



4, \_\_\_\_\_, 12, 16, \_\_\_\_\_, 24, \_\_\_\_\_, \_\_\_\_\_, 36,  
40, \_\_\_\_\_, 48, \_\_\_\_\_, \_\_\_\_\_, 60, 64, \_\_\_\_\_

- (2) Skip counting in 10's, write the number that comes after ...

20, \_\_\_\_\_ 90, \_\_\_\_\_ 70, \_\_\_\_\_

- (3) Write these decimal numbers in order from smallest to largest.



3.56  
9.5  
63.5  
5.9  
4.08

\_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

- (4) Round these numbers to the nearest 10.

586 = \_\_\_\_\_ 203 = \_\_\_\_\_

494 = \_\_\_\_\_ 145 = \_\_\_\_\_

Add and subtract these numbers.

(5)  $32 + 62 =$  \_\_\_\_\_ (10)  $97 - 27 =$  \_\_\_\_\_

(6)  $24 + 93 =$  \_\_\_\_\_ (11)  $122 - 41 =$  \_\_\_\_\_

(7)  $56 + 37 =$  \_\_\_\_\_ (12)  $65 - 26 =$  \_\_\_\_\_

(8) \_\_\_\_\_ + 89 = 134 (13)  $130 -$  \_\_\_\_\_ = 35

(9)  $85 +$  \_\_\_\_\_ = 96 (14) \_\_\_\_\_ - 61 = 87

(15)  $42 + 88 + 36 =$  \_\_\_\_\_ = \_\_\_\_\_

(16)  $93 + 133 =$  \_\_\_\_\_ = \_\_\_\_\_

Multiplying and dividing in 2's, 3's, 4's & 6's.

(17)  $2 \times 7 =$  \_\_\_\_\_ (23)  $16 \div 2 =$  \_\_\_\_\_

(18)  $4 \times 3 =$  \_\_\_\_\_ (24)  $30 \div 3 =$  \_\_\_\_\_

(19)  $4 \times 10 =$  \_\_\_\_\_ (25)  $24 \div 4 =$  \_\_\_\_\_

(20)  $7 \times 6 =$  \_\_\_\_\_ (26)  $18 \div 6 =$  \_\_\_\_\_

(21)  $2 \times$  \_\_\_\_\_ = 18 (27)  $12 \div$  \_\_\_\_\_ = 4

(22) \_\_\_\_\_  $\times 3 = 15$  (28) \_\_\_\_\_  $\div 6 = 9$

- (1) Write in the missing numbers as you skip count backwards in 6's.



\_\_\_\_\_, 90, 84, \_\_\_\_\_, \_\_\_\_\_, 66, 60, \_\_\_\_\_,  
\_\_\_\_\_, 42, \_\_\_\_\_, 30, 24, \_\_\_\_\_, 12, \_\_\_\_\_

- (2) Skip counting in 5's, write the number that comes before ...

\_\_\_\_\_, 30 \_\_\_\_\_, 45 \_\_\_\_\_, 75

- (3) Write these number words as 2 or 3-digit numerals.



ninety-seven \_\_\_\_\_

four hundred and twenty-five \_\_\_\_\_

- (4) Add all the numbers in this matrix.

40	19	3	
120	7	4	
11	80	60	
			Total

Add and subtract these numbers.

(5)  $27 + 70 =$  \_\_\_\_\_ (10)  $96 - 11 =$  \_\_\_\_\_

(6)  $31 + 41 =$  \_\_\_\_\_ (11)  $148 - 61 =$  \_\_\_\_\_

(7)  $26 + 39 =$  \_\_\_\_\_ (12)  $71 - 26 =$  \_\_\_\_\_

(8) \_\_\_\_\_ + 95 = 130 (13)  $146 -$  \_\_\_\_\_ = 48

(9)  $63 +$  \_\_\_\_\_ = 86 (14) \_\_\_\_\_ - 15 = 92

(15)  $135 + 84 =$  \_\_\_\_\_ = \_\_\_\_\_

(16)  $28 + 77 + 43 =$  \_\_\_\_\_ = \_\_\_\_\_

Multiplying and dividing in 2's, 3's, 4's & 6's.

(17)  $2 \times 8 =$  \_\_\_\_\_ (23)  $18 \div 2 =$  \_\_\_\_\_

(18)  $10 \times 3 =$  \_\_\_\_\_ (24)  $15 \div 3 =$  \_\_\_\_\_

(19)  $4 \times 6 =$  \_\_\_\_\_ (25)  $12 \div 4 =$  \_\_\_\_\_

(20)  $3 \times 6 =$  \_\_\_\_\_ (26)  $54 \div 6 =$  \_\_\_\_\_

(21)  $2 \times$  \_\_\_\_\_ = 20 (27)  $20 \div$  \_\_\_\_\_ = 4

(22) \_\_\_\_\_  $\times 3 = 21$  (28) \_\_\_\_\_  $\div 6 = 8$

- (1) Write in the missing numbers as you skip count backwards in 2's.



36, 34, \_\_\_\_\_, 30, \_\_\_\_\_, 26, \_\_\_\_\_, 22, \_\_\_\_\_,  
18, 16, \_\_\_\_\_, 12, \_\_\_\_\_, 8, \_\_\_\_\_, \_\_\_\_\_, 2

- (2) Skip counting in 3's, write the number that is between ...

6 \_\_\_\_\_ 12, 24 \_\_\_\_\_ 30, 36 \_\_\_\_\_ 42

- (3) Write these numerals as number words.

63 \_\_\_\_\_

472 \_\_\_\_\_

- (4) What is the value of the BOLD digit in each money total?

Example: In \$4**5** the 5 means 5 dollars.

\$2**5**0 = \_\_\_\_\_ \$16**5** = \_\_\_\_\_

\$24**3** = \_\_\_\_\_ \$46**7** = \_\_\_\_\_



Add and subtract these numbers.

(5)  $11 + 85 =$  \_\_\_\_\_ (10)  $86 - 23 =$  \_\_\_\_\_

(6)  $87 + 61 =$  \_\_\_\_\_ (11)  $107 - 92 =$  \_\_\_\_\_

(7)  $26 + 45 =$  \_\_\_\_\_ (12)  $41 - 14 =$  \_\_\_\_\_

(8) \_\_\_\_\_ + 98 = 146 (13)  $161 -$  \_\_\_\_\_ = 87

(9)  $34 +$  \_\_\_\_\_ = 49 (14) \_\_\_\_\_ - 61 = 66

(15)  $54 + 19 + 76 =$  \_\_\_\_\_ = \_\_\_\_\_

(16)  $145 + 93 =$  \_\_\_\_\_ = \_\_\_\_\_

Multiplying and dividing in 2's, 3's, 4's & 6's.

(17)  $2 \times 9 =$  \_\_\_\_\_ (23)  $20 \div 2 =$  \_\_\_\_\_

(18)  $5 \times 3 =$  \_\_\_\_\_ (24)  $21 \div 3 =$  \_\_\_\_\_

(19)  $4 \times 3 =$  \_\_\_\_\_ (25)  $20 \div 4 =$  \_\_\_\_\_

(20)  $9 \times 6 =$  \_\_\_\_\_ (26)  $48 \div 6 =$  \_\_\_\_\_

(21)  $2 \times$  \_\_\_\_\_ = 14 (27)  $40 \div$  \_\_\_\_\_ = 4

(22) \_\_\_\_\_  $\times 3 = 12$  (28) \_\_\_\_\_  $\div 6 = 7$

- (1) Write in the missing numbers as you skip count in 10's.



10, \_\_\_\_\_, \_\_\_\_\_, 40, \_\_\_\_\_, 60, \_\_\_\_\_, 80, \_\_\_\_\_,  
\_\_\_\_\_, \_\_\_\_\_, 110, \_\_\_\_\_, 130, \_\_\_\_\_, 150

- (2) Skip counting in 4's, write the number that comes after ...

12, \_\_\_\_\_ 36, \_\_\_\_\_ 24, \_\_\_\_\_

- (3) What do these fractions mean?

$\frac{1}{2}$  means \_\_\_\_\_ out of \_\_\_\_\_

$\frac{1}{3}$  means \_\_\_\_\_ out of \_\_\_\_\_



- (4) In Rooms 4 and 5 there are 17 boys and 13 girls. How many pupils are in these classes?



\_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_

Add and subtract these numbers.

(5)  $23 + 63 =$  \_\_\_\_\_ (10)  $49 - 15 =$  \_\_\_\_\_

(6)  $15 + 92 =$  \_\_\_\_\_ (11)  $127 - 61 =$  \_\_\_\_\_

(7)  $14 + 27 =$  \_\_\_\_\_ (12)  $83 - 38 =$  \_\_\_\_\_

(8) \_\_\_\_\_ + 74 = 161 (13)  $145 -$  \_\_\_\_\_ = 99

(9)  $62 +$  \_\_\_\_\_ = 94 (14) \_\_\_\_\_ - 93 = 24

(15)  $86 + 183 =$  \_\_\_\_\_ = \_\_\_\_\_

(16)  $45 + 18 + 75 =$  \_\_\_\_\_ = \_\_\_\_\_

Multiplying and dividing in 2's, 3's, 4's & 6's.

(17)  $2 \times 10 =$  \_\_\_\_\_ (23)  $14 \div 2 =$  \_\_\_\_\_

(18)  $7 \times 3 =$  \_\_\_\_\_ (24)  $12 \div 3 =$  \_\_\_\_\_

(19)  $4 \times 5 =$  \_\_\_\_\_ (25)  $40 \div 4 =$  \_\_\_\_\_

(20)  $8 \times 6 =$  \_\_\_\_\_ (26)  $42 \div 6 =$  \_\_\_\_\_

(21)  $2 \times$  \_\_\_\_\_ = 16 (27)  $24 \div$  \_\_\_\_\_ = 4

(22) \_\_\_\_\_  $\times 3 = 30$  (28) \_\_\_\_\_  $\div 6 = 3$

- (1) Write in the missing numbers as you skip count backwards in 5's.



\_\_\_\_, 80, \_\_\_\_, \_\_\_\_, 65, \_\_\_\_, \_\_\_\_, 50,  
\_\_\_\_, 40, 35, \_\_\_\_, 25, \_\_\_\_, \_\_\_\_, \_\_\_\_ 5

- (2) Skip counting in 6's, write the number that comes before ...

\_\_\_\_, 18    \_\_\_\_ , 30    \_\_\_\_ , 24

- (3) Write these decimal numbers in order from smallest to largest.



1.54  
6.7  
69.2  
7.6  
45.1

\_\_\_\_, \_\_\_\_ , \_\_\_\_ , \_\_\_\_ , \_\_\_\_

- (4) Multiplying large numbers.

Example:  $21 \times 3 = (20 \times 3) + (1 \times 3) = 60 + 3 = 63$

$$42 \times 5 = (\text{ } \times \text{ }) + (\text{ } \times \text{ })$$

$$= \text{ } + \text{ } = \text{ }$$

Add and subtract these numbers.

(5)  $15 + 34 = \text{ }$  (10)  $94 - 32 = \text{ }$

(6)  $66 + 61 = \text{ }$  (11)  $117 - 93 = \text{ }$

(7)  $38 + 45 = \text{ }$  (12)  $93 - 56 = \text{ }$

(8)  $\text{ } + 46 = 146$  (13)  $134 - \text{ } = 45$

(9)  $70 + \text{ } = 97$  (14)  $\text{ } - 41 = 81$

(15)  $25 + 19 + 81 = \text{ }$

(16)  $94 + 144 = \text{ }$

Multiplying and dividing in 3's, 4's, 6's & 10's.

(17)  $10 \times 3 = \text{ }$  (23)  $40 \div 10 = \text{ }$

(18)  $\text{ } \times 4 = \text{ }$  (24)  $36 \div 4 = \text{ }$

(19)  $3 \times 8 = \text{ }$  (25)  $21 \div 3 = \text{ }$

(20)  $5 \times 6 = \text{ }$  (26)  $60 \div 6 = \text{ }$

(21)  $10 \times \text{ } = 50$  (27)  $12 \div \text{ } = 4$

(22)  $\text{ } \times 4 = 12$  (28)  $\text{ } \div 6 = 6$

- (1) Write in the missing numbers as you skip count in 3's.



3, \_\_\_\_, 9, \_\_\_\_, \_\_\_\_, 13, 21, \_\_\_\_, 27,  
\_\_\_\_, \_\_\_\_, 36, 39, \_\_\_\_, 45, \_\_\_\_

- (2) Skip counting in 10's, write the number that is between ...

30 \_\_\_\_ 50, 70 \_\_\_\_ 90, 100 \_\_\_\_ 120

- (3) What is the value of the BOLD digit in each money total?

Example: In \$45 the 5 means 5 dollars.

**\$403** = \_\_\_\_\_ **\$962** = \_\_\_\_\_

**\$147** = \_\_\_\_\_ **\$576** = \_\_\_\_\_



- (4) Round these numbers to the nearest 100.

523 = \_\_\_\_\_ 946 = \_\_\_\_\_

489 = \_\_\_\_\_ 275 = \_\_\_\_\_

Add and subtract these numbers.

(5)  $14 + 71 = \text{ }$  (10)  $83 - 62 = \text{ }$

(6)  $27 + 82 = \text{ }$  (11)  $128 - 78 = \text{ }$

(7)  $19 + 67 = \text{ }$  (12)  $90 - 43 = \text{ }$

(8)  $\text{ } + 84 = 143$  (13)  $128 - \text{ } = 39$

(9)  $40 + \text{ } = 56$  (14)  $\text{ } - 71 = 78$

(15)  $194 + 71 = \text{ }$

(16)  $45 + 38 + 85 = \text{ }$

Multiplying and dividing in 3's, 4's, 6's & 10's.

(17)  $10 \times 4 = \text{ }$  (23)  $50 \div 10 = \text{ }$

(18)  $9 \times 4 = \text{ }$  (24)  $12 \div 4 = \text{ }$

(19)  $3 \times 7 = \text{ }$  (25)  $12 \div 3 = \text{ }$

(20)  $10 \times 6 = \text{ }$  (26)  $42 \div 6 = \text{ }$

(21)  $10 \times \text{ } = 40$  (27)  $27 \div \text{ } = 3$

(22)  $\text{ } \times 4 = 32$  (28)  $\text{ } \div 6 = 4$

- (1) Write in the missing numbers as you skip count backwards in 4's.



64, \_\_\_\_\_, 56, \_\_\_\_\_, \_\_\_\_\_, 44, 40, \_\_\_\_\_,  
32, \_\_\_\_\_, \_\_\_\_\_, 20, 16, \_\_\_\_\_, 8, \_\_\_\_\_

- (2) Skip counting in 5's, write the number that comes after ...

20, \_\_\_\_\_ 45, \_\_\_\_\_ 60, \_\_\_\_\_

- (3) Find each fraction of these whole numbers.

$\frac{1}{2}$  of 24 = \_\_\_\_\_  $\frac{1}{2}$  of 36 = \_\_\_\_\_

$\frac{1}{4}$  of 48 = \_\_\_\_\_  $\frac{1}{3}$  of 39 = \_\_\_\_\_

- (4) What is the place value of the BOLD digit and what does it mean?

Example: In **4**52 the place value is 10's and it means 50.

6**1**4 = \_\_\_\_\_ = \_\_\_\_\_ 6**2**0 = \_\_\_\_\_ = \_\_\_\_\_

9**6**2 = \_\_\_\_\_ = \_\_\_\_\_ 3**7**5 = \_\_\_\_\_ = \_\_\_\_\_

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Add and subtract these numbers.

(5)  $62 + 21 =$  \_\_\_\_\_ (10)  $56 - 16 =$  \_\_\_\_\_

(6)  $50 + 78 =$  \_\_\_\_\_ (11)  $149 - 71 =$  \_\_\_\_\_

(7)  $43 + 47 =$  \_\_\_\_\_ (12)  $76 - 47 =$  \_\_\_\_\_

(8) \_\_\_\_\_ + 89 = 128 (13)  $137 -$  \_\_\_\_\_ = 99

(9)  $27 +$  \_\_\_\_\_ = 57 (14) \_\_\_\_\_ - 35 = 84

(15)  $73 + 27 + 45 =$  \_\_\_\_\_ = \_\_\_\_\_

(16)  $156 + 63 =$  \_\_\_\_\_ = \_\_\_\_\_

Multiplying and dividing in 3's, 4's, 6's & 10's.

(17)  $10 \times 5 =$  \_\_\_\_\_ (23)  $60 \div 10 =$  \_\_\_\_\_

(18)  $4 \times 4 =$  \_\_\_\_\_ (24)  $32 \div 4 =$  \_\_\_\_\_

(19)  $3 \times 4 =$  \_\_\_\_\_ (25)  $27 \div 3 =$  \_\_\_\_\_

(20)  $6 \times 6 =$  \_\_\_\_\_ (26)  $18 \div 6 =$  \_\_\_\_\_

(21)  $10 \times$  \_\_\_\_\_ = 30 (27)  $24 \div$  \_\_\_\_\_ = 3

(22) \_\_\_\_\_  $\times 4 = 24$  (28) \_\_\_\_\_  $\div 6 = 5$

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- (1) Write in the missing numbers as you skip count in 6's.



\_\_\_\_\_, 12, \_\_\_\_\_, \_\_\_\_\_, 30, 36, \_\_\_\_\_, \_\_\_\_\_,  
54, \_\_\_\_\_, 66, \_\_\_\_\_, \_\_\_\_\_, 84, 90, \_\_\_\_\_

- (2) Skip counting in 3's, write the number that comes before ...

\_\_\_\_\_, 33 \_\_\_\_\_, 24 \_\_\_\_\_, 15

- (3) Write these number words as decimal numerals.



five point three two seven \_\_\_\_\_

twenty-five point nine eight \_\_\_\_\_

- (4) Add all the numbers in this matrix.

6	130	55	
19	35	7	
70	1	4	
			Total

Add and subtract these numbers.

(5)  $16 + 40 =$  \_\_\_\_\_ (10)  $57 - 30 =$  \_\_\_\_\_

(6)  $73 + 71 =$  \_\_\_\_\_ (11)  $119 - 35 =$  \_\_\_\_\_

(7)  $47 + 29 =$  \_\_\_\_\_ (12)  $80 - 24 =$  \_\_\_\_\_

(8) \_\_\_\_\_ + 38 = 137 (13)  $125 -$  \_\_\_\_\_ = 57

(9)  $35 +$  \_\_\_\_\_ = 98 (14) \_\_\_\_\_ - 51 = 75

(15)  $93 + 161 =$  \_\_\_\_\_ = \_\_\_\_\_

(16)  $27 + 76 + 44 =$  \_\_\_\_\_ = \_\_\_\_\_

Multiplying and dividing in 3's, 4's, 6's & 10's.

(17)  $10 \times 6 =$  \_\_\_\_\_ (23)  $30 \div 10 =$  \_\_\_\_\_

(18)  $8 \times 4 =$  \_\_\_\_\_ (24)  $24 \div 4 =$  \_\_\_\_\_

(19)  $3 \times 9 =$  \_\_\_\_\_ (25)  $24 \div 3 =$  \_\_\_\_\_

(20)  $4 \times 6 =$  \_\_\_\_\_ (26)  $30 \div 6 =$  \_\_\_\_\_

(21)  $10 \times$  \_\_\_\_\_ = 100 (27)  $21 \div$  \_\_\_\_\_ = 3

(22) \_\_\_\_\_  $\times 4 = 36$  (28) \_\_\_\_\_  $\div 6 = 10$

- (1) Write in the missing numbers as you skip count in 2's.



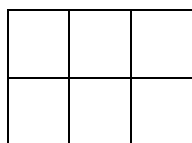
2, 4, \_\_\_\_\_, \_\_\_\_\_, 10, \_\_\_\_\_, 14, \_\_\_\_\_, \_\_\_\_\_,  
20, 22, \_\_\_\_\_, 26, \_\_\_\_\_, \_\_\_\_\_, 32, \_\_\_\_\_, 36

- (2) Skip counting in 4's, write the number that is between ...

20 \_\_\_\_\_ 28, 36 \_\_\_\_\_ 44, 8 \_\_\_\_\_ 16

- (3) Shade in part of each diagram to show you understand these fractions.

$\frac{1}{3}$



$\frac{1}{4}$



- (4) Multiplying large numbers.

Example:  $19 \times 2 = (20 \times 2) - (1 \times 2) = 40 - 2 = 38$

$$58 \times 5 = (\text{_____} \times \text{_____}) - (\text{_____} \times \text{_____})$$

$$= \text{_____} - \text{_____} = \text{_____}$$

Add and subtract these numbers.

(5)  $30 + 27 = \text{_____}$  (10)  $98 - 63 = \text{_____}$

(6)  $84 + 35 = \text{_____}$  (11)  $126 - 51 = \text{_____}$

(7)  $24 + 56 = \text{_____}$  (12)  $64 - 36 = \text{_____}$

(8)  $\text{_____} + 68 = 125$  (13)  $147 - \text{_____} = 78$

(9)  $71 + \text{_____} = 85$  (14)  $\text{_____} - 82 = 27$

(15)  $28 + 94 + 62 = \text{_____} = \text{_____}$

(16)  $87 + 132 = \text{_____} = \text{_____}$

Multiplying and dividing in 3's, 4's, 6's & 10's.

(17)  $10 \times 7 = \text{_____}$  (23)  $80 \div 10 = \text{_____}$

(18)  $3 \times 4 = \text{_____}$  (24)  $40 \div 4 = \text{_____}$

(19)  $3 \times 10 = \text{_____}$  (25)  $18 \div 3 = \text{_____}$

(20)  $7 \times 6 = \text{_____}$  (26)  $24 \div 6 = \text{_____}$

(21)  $10 \times \text{_____} = 90$  (27)  $9 \div \text{_____} = 3$

(22)  $\text{_____} \times 4 = 20$  (28)  $\text{_____} \div 6 = 9$

- (1) Write in the missing numbers as you skip count backwards in 10's.



150, 140, \_\_\_\_\_, \_\_\_\_\_, 110, \_\_\_\_\_, \_\_\_\_\_, 80  
\_\_\_\_\_, 60, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, 20, \_\_\_\_\_

- (2) Skip counting in 6's, write the number that comes after ...

36, \_\_\_\_\_ 18, \_\_\_\_\_ 54, \_\_\_\_\_

- (3) Write these decimal numbers in order from smallest to largest.



86.2

7.8

2.68

8.7

49.7

\_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

- (4) In Rooms 6 and 7 there are 33 pupils. If 19 are girls, how many are boys?



$$\text{_____} - \text{_____} = \text{_____}$$

Add and subtract these numbers.

(5)  $63 + 35 = \text{_____}$  (10)  $85 - 14 = \text{_____}$

(6)  $75 + 51 = \text{_____}$  (11)  $109 - 82 = \text{_____}$

(7)  $36 + 28 = \text{_____}$  (12)  $86 - 19 = \text{_____}$

(8)  $\text{_____} + 69 = 147$  (13)  $143 - \text{_____} = 59$

(9)  $21 + \text{_____} = 83$  (14)  $\text{_____} - 78 = 50$

(15)  $184 + 91 = \text{_____} = \text{_____}$

(16)  $19 + 74 + 56 = \text{_____} = \text{_____}$

Multiplying and dividing in 3's, 4's, 6's & 10's.

(17)  $10 \times 8 = \text{_____}$  (23)  $90 \div 10 = \text{_____}$

(18)  $10 \times 4 = \text{_____}$  (24)  $20 \div 4 = \text{_____}$

(19)  $3 \times 6 = \text{_____}$  (25)  $9 \div 3 = \text{_____}$

(20)  $7 \times 6 = \text{_____}$  (26)  $54 \div 6 = \text{_____}$

(21)  $10 \times \text{_____} = 60$  (27)  $15 \div \text{_____} = 3$

(22)  $\text{_____} \times 4 = 28$  (28)  $\text{_____} \div 6 = 8$

# Number Knowledge Progress Assessment 3

Practical / oral assessment: **Ask** each question as outlined below. **Record** the results by circling yes or no

	Practical / Oral Questions (Supply your child with some paper)	Result (circle)
1	<b>Skip counting</b> in <b>3's, 4's, 5's</b> and <b>6's</b> , ask your child to <b>recite</b> a <b>forward</b> and <b>backward</b> sequence of at least the first <b>10 multiples</b> for each number.	yes / no
2	<b>Skip counting</b> in <b>3's, 4's, 5's</b> and <b>6's</b> , ask your child to <b>write</b> a <b>forward</b> and <b>backward</b> sequence of at least the first <b>10 multiples</b> for each number.	yes / no
3	<b>Write 5 decimal numbers</b> in a mixed order. Ask your child to <b>rewrite</b> these decimal numbers in <b>order</b> from <b>smallest</b> to <b>largest</b> or <b>largest</b> to <b>smallest</b> . Repeat with up to 10 different numerals.	yes / no
4	<b>Write</b> up to <b>10</b> 2 or 3 digit numbers and ask your child to <b>round</b> each number to the <b>nearest 10</b> or <b>100</b> .	yes / no
5	<b>Numeracy facts up to 10.</b> Model each <b>addition</b> and <b>subtraction</b> problem, if required. Tick each correct answer.	yes / no
6	<b>Numeracy facts 11 to 18.</b> Model each <b>addition</b> and <b>subtraction</b> problem, if required. Tick each correct answer.	yes / no
7	<b>3x, 4x, 5x &amp; 6x multiplication and division facts.</b>  Ask these facts one of several ways, such as ...  "What does 3 multiplied by 9 equal?"  What does 27 divided by 3 equal?"  "What number multiplied by 3 gives you an answer of 27?"	yes / no

Number Knowledge - the key to success!



- (1) Write in the missing numbers as you skip count in 5's.



5, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, 25, \_\_\_\_\_, 35, \_\_\_\_\_,  
\_\_\_\_\_, \_\_\_\_\_, 55, \_\_\_\_\_, 65, \_\_\_\_\_, 75, \_\_\_\_\_

- (2) Skip counting in 10's, write the number that comes before ...

\_\_\_\_\_, 80      \_\_\_\_\_, 110      \_\_\_\_\_, 50

- (3) Write these decimals as number words.

53.2

7.64

- (4) Add all the numbers in this matrix.

60	9	180	
70	2	30	
20	40	8	
			Total

Add and subtract these numbers.

(5)  $31 + 145 =$  \_\_\_\_\_ (10)  $296 - 24 =$  \_\_\_\_\_

(6)  $213 + 72 =$  \_\_\_\_\_ (11)  $182 - 51 =$  \_\_\_\_\_

(7)  $37 + 342 =$  \_\_\_\_\_ (12)  $317 - 32 =$  \_\_\_\_\_

(8) \_\_\_\_\_ + 67 = 192 (13)  $382 -$  \_\_\_\_\_ = 363

(9)  $132 +$  \_\_\_\_\_ = 183 (14) \_\_\_\_\_ - 19 = 340

(15)  $49 + 81 + 27 =$  \_\_\_\_\_ = \_\_\_\_\_

(16)  $128 + 291 =$  \_\_\_\_\_ = \_\_\_\_\_

Multiplying and dividing in 3's, 4's, 6's & 10's.

(17)  $10 \times 9 =$  \_\_\_\_\_ (23)  $100 \div 10 =$  \_\_\_\_\_

(18)  $5 \times 4 =$  \_\_\_\_\_ (24)  $28 \div 4 =$  \_\_\_\_\_

(19)  $3 \times 3 =$  \_\_\_\_\_ (25)  $15 \div 3 =$  \_\_\_\_\_

(20)  $9 \times 6 =$  \_\_\_\_\_ (26)  $48 \div 6 =$  \_\_\_\_\_

(21)  $10 \times$  \_\_\_\_\_ = 70 (27)  $30 \div$  \_\_\_\_\_ = 3

(22) \_\_\_\_\_  $\times 4 = 16$  (28) \_\_\_\_\_  $\div 6 = 7$

- (1) Write in the missing numbers as you skip count backwards in 3's.



45, \_\_\_\_\_, 39, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, 27, \_\_\_\_\_,  
\_\_\_\_\_, 18, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, 6, \_\_\_\_\_

- (2) Skip counting in 5's, write the number that is between ...

5 \_\_\_\_\_ 15, 40 \_\_\_\_\_ 50, 75 \_\_\_\_\_ 85

- (3) What do these fractions mean?



$\frac{1}{5}$  means \_\_\_\_\_ out of \_\_\_\_\_

$\frac{1}{6}$  means \_\_\_\_\_ out of \_\_\_\_\_

- (4) Round these numbers to the nearest 10.

563 = \_\_\_\_\_ 482 = \_\_\_\_\_

957 = \_\_\_\_\_ 745 = \_\_\_\_\_

Add and subtract these numbers.

(5)  $24 + 272 =$  \_\_\_\_\_ (10)  $183 - 51 =$  \_\_\_\_\_

(6)  $131 + 51 =$  \_\_\_\_\_ (11)  $359 - 19 =$  \_\_\_\_\_

(7)  $32 + 285 =$  \_\_\_\_\_ (12)  $339 - 45 =$  \_\_\_\_\_

(8) \_\_\_\_\_ + 19 = 382 (13)  $190 -$  \_\_\_\_\_ = 147

(9)  $384 +$  \_\_\_\_\_ = 398 (14) \_\_\_\_\_ - 12 = 126

(15)  $262 + 152 =$  \_\_\_\_\_ = \_\_\_\_\_

(16)  $53 + 19 + 67 =$  \_\_\_\_\_ = \_\_\_\_\_

Multiplying and dividing in 3's, 4's, 6's & 10's.

(17)  $10 \times 10 =$  \_\_\_\_\_ (23)  $70 \div 10 =$  \_\_\_\_\_

(18)  $7 \times 4 =$  \_\_\_\_\_ (24)  $16 \div 4 =$  \_\_\_\_\_

(19)  $3 \times 5 =$  \_\_\_\_\_ (25)  $30 \div 3 =$  \_\_\_\_\_

(20)  $8 \times 6 =$  \_\_\_\_\_ (26)  $36 \div 6 =$  \_\_\_\_\_

(21)  $10 \times$  \_\_\_\_\_ = 80 (27)  $18 \div$  \_\_\_\_\_ = 3

(22) \_\_\_\_\_  $\times 4 = 40$  (28) \_\_\_\_\_  $\div 6 = 7$

- (1) Write in the missing numbers as you skip count in 4's.



4, \_\_\_\_\_, \_\_\_\_\_, 16, \_\_\_\_\_, 24, \_\_\_\_\_, \_\_\_\_\_,  
36, 40, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, 56, \_\_\_\_\_, 64

- (2) Skip counting in 3's, write the number that comes after ...

39, \_\_\_\_\_ 15, \_\_\_\_\_ 27, \_\_\_\_\_

- (3) Write these number words as 2 or 3-digit numerals.

seventy-four \_\_\_\_\_

five hundred and ninety-eight \_\_\_\_\_

- (4) Multiplying large numbers.

Example:  $21 \times 6 = (20 \times 6) + (1 \times 6) = 120 + 6 = 126$

$$83 \times 4 = (\text{_____} \times \text{_____}) + (\text{_____} \times \text{_____})$$

$$= \text{_____} + \text{_____} = \text{_____}$$

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Add and subtract these numbers.

(5)  $51 + 132 = \text{_____}$  (10)  $398 - 14 = \text{_____}$

(6)  $340 + 19 = \text{_____}$  (11)  $138 - 12 = \text{_____}$

(7)  $45 + 294 = \text{_____}$  (12)  $348 - 61 = \text{_____}$

(8)  $\text{_____} + 43 = 190$  (13)  $192 - \text{_____} = 136$

(9)  $241 + \text{_____} = 266$  (14)  $\text{_____} - 83 = 126$

(15)  $81 + 19 + 43 = \text{_____}$

(16)  $391 + 183 = \text{_____}$

Multiplying and dividing in 3's, 4's, 5's & 6's.

(17)  $5 \times 3 = \text{_____}$  (23)  $20 \div 5 = \text{_____}$

(18)  $6 \times 6 = \text{_____}$  (24)  $54 \div 6 = \text{_____}$

(19)  $3 \times 8 = \text{_____}$  (25)  $21 \div 3 = \text{_____}$

(20)  $5 \times 4 = \text{_____}$  (26)  $40 \div 4 = \text{_____}$

(21)  $5 \times \text{_____} = 25$  (27)  $12 \div \text{_____} = 3$

(22)  $\text{_____} \times 6 = 18$  (28)  $\text{_____} \div 4 = 6$

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- (1) Write in the missing numbers as you skip count backwards in 6's.

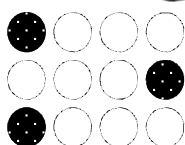
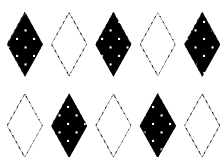


90, \_\_\_\_\_, 78, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, 54, \_\_\_\_\_,  
\_\_\_\_\_, 36, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, 12, \_\_\_\_\_

- (2) Skip counting in 4's, write the number that comes before ...

\_\_\_\_\_, 36 \_\_\_\_\_, 20 \_\_\_\_\_, 28

- (3) What fraction of each group of shapes is shaded?



- (4) What is the place value of the BOLD digit and what does it mean?

Example: In 4**5**2 the place value is 10's and it means 50.

$395 = \text{_____} = \text{_____}$   $860 = \text{_____} = \text{_____}$

$213 = \text{_____} = \text{_____}$   $943 = \text{_____} = \text{_____}$

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Add and subtract these numbers.

(5)  $14 + 384 = \text{_____}$  (10)  $266 - 25 = \text{_____}$

(6)  $126 + 12 = \text{_____}$  (11)  $158 - 46 = \text{_____}$

(7)  $61 + 287 = \text{_____}$  (12)  $209 - 83 = \text{_____}$

(8)  $\text{_____} + 56 = 192$  (13)  $381 - \text{_____} = 344$

(9)  $145 + \text{_____} = 176$  (14)  $\text{_____} - 72 = 213$

(15)  $173 + 484 = \text{_____}$

(16)  $57 + 42 + 63 = \text{_____}$

Multiplying and dividing in 3's, 4's, 5's & 6's.

(17)  $5 \times 4 = \text{_____}$  (23)  $25 \div 5 = \text{_____}$

(18)  $9 \times 6 = \text{_____}$  (24)  $18 \div 6 = \text{_____}$

(19)  $3 \times 7 = \text{_____}$  (25)  $12 \div 3 = \text{_____}$

(20)  $10 \times 4 = \text{_____}$  (26)  $24 \div 4 = \text{_____}$

(21)  $5 \times \text{_____} = 30$  (27)  $27 \div \text{_____} = 3$

(22)  $\text{_____} \times 6 = 48$  (28)  $\text{_____} \div 4 = 4$

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- (1) Write in the missing numbers as you skip count backwards in 2's.



32, \_\_\_\_\_, \_\_\_\_\_, 26, \_\_\_\_\_, 22, \_\_\_\_\_, \_\_\_\_\_,  
16, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, 8, \_\_\_\_\_, \_\_\_\_\_, 2

- (2) Skip counting in 6's, write the number that is between ...

36 \_\_\_\_\_ 48, 12 \_\_\_\_\_ 24, 30 \_\_\_\_\_ 42

- (3) Write these decimal numbers in order from smallest to largest.



1.09  
65.4  
6.73  
45.6  
3.76

\_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

- (4) Add all the numbers in this matrix.

3	110	150	
50	9	60	
40	90	7	
			Total

Add and subtract these numbers.

(5)  $25 + 241 =$  \_\_\_\_\_ (10)  $176 - 31 =$  \_\_\_\_\_

(6)  $112 + 46 =$  \_\_\_\_\_ (11)  $285 - 72 =$  \_\_\_\_\_

(7)  $83 + 126 =$  \_\_\_\_\_ (12)  $379 - 37 =$  \_\_\_\_\_

(8) \_\_\_\_\_ + 37 = 381 (13)  $192 -$  \_\_\_\_\_ = 125

(9)  $272 +$  \_\_\_\_\_ = 296 (14) \_\_\_\_\_ - 51 = 131

(15)  $19 + 76 + 34 =$  \_\_\_\_\_ = \_\_\_\_\_

(16)  $193 + 325 =$  \_\_\_\_\_ = \_\_\_\_\_

Multiplying and dividing in 3's, 4's, 5's & 6's.

(17)  $5 \times 5 =$  \_\_\_\_\_ (23)  $30 \div 5 =$  \_\_\_\_\_

(18)  $3 \times 6 =$  \_\_\_\_\_ (24)  $48 \div 6 =$  \_\_\_\_\_

(19)  $3 \times 4 =$  \_\_\_\_\_ (25)  $27 \div 3 =$  \_\_\_\_\_

(20)  $6 \times 4 =$  \_\_\_\_\_ (26)  $16 \div 4 =$  \_\_\_\_\_

(21)  $5 \times$  \_\_\_\_\_ = 15 (27)  $24 \div$  \_\_\_\_\_ = 3

(22) \_\_\_\_\_  $\times 6 = 36$  (28) \_\_\_\_\_  $\div 4 = 5$

- (1) Write in the missing numbers as you skip count in 10's.



10, \_\_\_\_\_, 30, \_\_\_\_\_, 50, 60, \_\_\_\_\_, \_\_\_\_\_, 90,  
\_\_\_\_\_, 110, \_\_\_\_\_, 140, \_\_\_\_\_

- (2) Skip counting in 5's, write the number that comes after ...

25, \_\_\_\_\_ 80, \_\_\_\_\_ 65, \_\_\_\_\_

- (3) Write these numerals as number words.

368

\_\_\_\_\_

904

\_\_\_\_\_

- (4) In Rooms 4 and 5 there are 34 boys and 18 girls. How many pupils are in these classes?



\_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_

Add and subtract these numbers.

(5)  $73 + 211 =$  \_\_\_\_\_ (10)  $299 - 46 =$  \_\_\_\_\_

(6)  $337 + 60 =$  \_\_\_\_\_ (11)  $175 - 63 =$  \_\_\_\_\_

(7)  $71 + 178 =$  \_\_\_\_\_ (12)  $437 - 53 =$  \_\_\_\_\_

(8) \_\_\_\_\_ + 31 = 290 (13)  $195 -$  \_\_\_\_\_ = 168

(9)  $138 +$  \_\_\_\_\_ = 178 (14) \_\_\_\_\_ - 55 = 154

(15)  $233 + 196 =$  \_\_\_\_\_ = \_\_\_\_\_

(16)  $48 + 37 + 72 =$  \_\_\_\_\_ = \_\_\_\_\_

Multiplying and dividing in 3's, 4's, 5's & 6's.

(17)  $5 \times 6 =$  \_\_\_\_\_ (23)  $15 \div 5 =$  \_\_\_\_\_

(18)  $8 \times 6 =$  \_\_\_\_\_ (24)  $36 \div 6 =$  \_\_\_\_\_

(19)  $3 \times 9 =$  \_\_\_\_\_ (25)  $24 \div 3 =$  \_\_\_\_\_

(20)  $4 \times 4 =$  \_\_\_\_\_ (26)  $20 \div 4 =$  \_\_\_\_\_

(21)  $5 \times$  \_\_\_\_\_ = 20 (27)  $21 \div$  \_\_\_\_\_ = 3

(22) \_\_\_\_\_  $\times 6 = 54$  (28) \_\_\_\_\_  $\div 4 = 10$

- (1) Write in the missing numbers as you skip count backwards in 5's.



75, \_\_\_\_\_, 65, 60, \_\_\_\_\_, \_\_\_\_\_, 45, \_\_\_\_\_,  
\_\_\_\_\_, 30, 25, \_\_\_\_\_, \_\_\_\_\_, 10, \_\_\_\_\_

- (2) Skip counting in 3's, write the number that comes before ...

\_\_\_\_\_, 36      \_\_\_\_\_, 15      \_\_\_\_\_, 24

- (3) What is the value of the BOLD digit in each money total?

Example: In \$45 the 5 means 5 dollars.



\$179 = \_\_\_\_\_      \$452 = \_\_\_\_\_

\$849 = \_\_\_\_\_      \$231 = \_\_\_\_\_

- (4) Multiplying large numbers.

Example:  $18 \times 4 = (20 \times 4) - (2 \times 4) = 80 - 8 = 72$

$37 \times 4 = (\text{_____} \times \text{_____}) - (\text{_____} \times \text{_____})$   
= \_\_\_\_\_ - \_\_\_\_\_ = \_\_\_\_\_

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Add and subtract these numbers.

(5)  $46 + 253 = \text{_____}$  (10)  $178 - 40 = \text{_____}$

(6)  $112 + 63 = \text{_____}$  (11)  $374 - 52 = \text{_____}$

(7)  $53 + 384 = \text{_____}$  (12)  $379 - 84 = \text{_____}$

(8) \_\_\_\_\_ + 27 = 195 (13)  $283 - \text{_____} = 256$

(9)  $320 + \text{_____} = 394$  (14) \_\_\_\_\_ - 62 = 215

(15)  $52 + 17 + 68 = \text{_____}$

(16)  $161 + 396 = \text{_____}$

Multiplying and dividing in 3's, 4's, 5's & 6's.

(17)  $5 \times 7 = \text{_____}$  (23)  $40 \div 5 = \text{_____}$

(18)  $4 \times 6 = \text{_____}$  (24)  $60 \div 6 = \text{_____}$

(19)  $3 \times 10 = \text{_____}$  (25)  $18 \div 3 = \text{_____}$

(20)  $7 \times 4 = \text{_____}$  (26)  $12 \div 4 = \text{_____}$

(21)  $5 \times \text{_____} = 45$  (27)  $9 \div \text{_____} = 3$

(22) \_\_\_\_\_  $\times 6 = 30$  (28) \_\_\_\_\_  $\div 4 = 9$

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- (1) Write in the missing numbers as you skip count in 3's.



\_\_\_\_\_, \_\_\_\_\_, 9, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, 21, \_\_\_\_\_,  
\_\_\_\_\_, 30, \_\_\_\_\_, 36, \_\_\_\_\_, 42, 45

- (2) Skip counting in 4's, write the number that is between ...

16 \_\_\_\_\_ 24, 36 \_\_\_\_\_ 44, 28 \_\_\_\_\_ 36

- (3) Find each fraction of these whole numbers.

$\frac{1}{4}$  of 24 = \_\_\_\_\_       $\frac{1}{3}$  of 27 = \_\_\_\_\_

$\frac{1}{5}$  of 80 = \_\_\_\_\_       $\frac{1}{10}$  of 90 = \_\_\_\_\_

- (4) Round these numbers to the nearest 100.

962 = \_\_\_\_\_      249 = \_\_\_\_\_

461 = \_\_\_\_\_      750 = \_\_\_\_\_

Add and subtract these numbers.

(5)  $40 + 138 = \text{_____}$  (10)  $394 - 74 = \text{_____}$

(6)  $322 + 52 = \text{_____}$  (11)  $277 - 62 = \text{_____}$

(7)  $84 + 295 = \text{_____}$  (12)  $218 - 57 = \text{_____}$

(8) \_\_\_\_\_ + 27 = 283 (13)  $174 - \text{_____} = 145$

(9)  $241 + \text{_____} = 294$  (14) \_\_\_\_\_ - 31 = 338

(15)  $266 + 182 = \text{_____}$

(16)  $85 + 16 + 65 = \text{_____}$

Multiplying and dividing in 3's, 4's, 5's & 6's.

(17)  $5 \times 8 = \text{_____}$  (23)  $45 \div 5 = \text{_____}$

(18)  $10 \times 6 = \text{_____}$  (24)  $30 \div 6 = \text{_____}$

(19)  $3 \times 6 = \text{_____}$  (25)  $9 \div 3 = \text{_____}$

(20)  $3 \times 4 = \text{_____}$  (26)  $36 \div 4 = \text{_____}$

(21)  $5 \times \text{_____} = 50$  (27)  $15 \div \text{_____} = 3$

(22) \_\_\_\_\_  $\times 6 = 42$  (28) \_\_\_\_\_  $\div 4 = 8$

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- (1) Write in the missing numbers as you skip count backwards in 4's.



\_\_\_\_\_, \_\_\_\_\_, 52, 48, \_\_\_\_\_, 40, \_\_\_\_\_,  
\_\_\_\_\_, \_\_\_\_\_, 24, \_\_\_\_\_, \_\_\_\_\_, 12, \_\_\_\_\_, 4

- (2) Skip counting in 6's, write the number that comes after ...

18, \_\_\_\_\_ 66, \_\_\_\_\_ 42, \_\_\_\_\_

- (3) Write these decimals as number words.

6.38 \_\_\_\_\_

94.5 \_\_\_\_\_

- (4) Add all the numbers in this matrix.

140	80	7	
5	60	9	
13	5	120	
			Total

Add and subtract these numbers.

(5)  $74 + 320 =$  \_\_\_\_\_ (10)  $294 - 53 =$  \_\_\_\_\_

(6)  $215 + 62 =$  \_\_\_\_\_ (11)  $369 - 31 =$  \_\_\_\_\_

(7)  $57 + 161 =$  \_\_\_\_\_ (12)  $329 - 42 =$  \_\_\_\_\_

(8) \_\_\_\_\_ + 29 = 174 (13)  $176 -$  \_\_\_\_\_ = 139

(9)  $211 +$  \_\_\_\_\_ = 284 (14) \_\_\_\_\_ - 60 = 337

(15)  $14 + 78 + 82 =$  \_\_\_\_\_ = \_\_\_\_\_

(16)  $194 + 285 =$  \_\_\_\_\_ = \_\_\_\_\_

Multiplying and dividing in 3's, 4's, 5's & 6's.

(17)  $5 \times 9 =$  \_\_\_\_\_ (23)  $50 \div 5 =$  \_\_\_\_\_

(18)  $5 \times 6 =$  \_\_\_\_\_ (24)  $42 \div 6 =$  \_\_\_\_\_

(19)  $3 \times 3 =$  \_\_\_\_\_ (25)  $15 \div 3 =$  \_\_\_\_\_

(20)  $9 \times 4 =$  \_\_\_\_\_ (26)  $32 \div 4 =$  \_\_\_\_\_

(21)  $5 \times$  \_\_\_\_\_ = 35 (27)  $30 \div$  \_\_\_\_\_ = 3

(22) \_\_\_\_\_  $\times 6 = 24$  (28) \_\_\_\_\_  $\div 4 = 7$

- (1) Write in the missing numbers as you skip count in 6's.



6, \_\_\_\_\_, \_\_\_\_\_, 24, 30, \_\_\_\_\_, \_\_\_\_\_, 48,  
\_\_\_\_\_, 60, \_\_\_\_\_, \_\_\_\_\_, 78, \_\_\_\_\_, 90

- (2) Skip counting in 10's, write the number that comes before ...

\_\_\_\_\_, 120 \_\_\_\_\_, 30 \_\_\_\_\_, 80

- (3) Write these decimal numbers in order from smallest to largest.



2.48  
10.9  
8.42  
63.1  
1.36

\_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

- (4) Round these numbers to the nearest 10th.

2.32 = \_\_\_\_\_ 9.46 = \_\_\_\_\_

10.39 = \_\_\_\_\_ 57.15 = \_\_\_\_\_

Add and subtract these numbers.

(5)  $53 + 241 =$  \_\_\_\_\_ (10)  $284 - 73 =$  \_\_\_\_\_

(6)  $338 + 31 =$  \_\_\_\_\_ (11)  $397 - 60 =$  \_\_\_\_\_

(7)  $42 + 287 =$  \_\_\_\_\_ (12)  $249 - 71 =$  \_\_\_\_\_

(8) \_\_\_\_\_ + 37 = 176 (13)  $290 -$  \_\_\_\_\_ = 259

(9)  $253 +$  \_\_\_\_\_ = 299 (14) \_\_\_\_\_ - 63 = 112

(15)  $294 + 193 =$  \_\_\_\_\_ = \_\_\_\_\_

(16)  $54 + 86 + 19 =$  \_\_\_\_\_ = \_\_\_\_\_

Multiplying and dividing in 3's, 4's, 5's & 6's.

(17)  $5 \times 10 =$  \_\_\_\_\_ (23)  $35 \div 5 =$  \_\_\_\_\_

(18)  $7 \times 6 =$  \_\_\_\_\_ (24)  $24 \div 6 =$  \_\_\_\_\_

(19)  $3 \times 5 =$  \_\_\_\_\_ (25)  $30 \div 3 =$  \_\_\_\_\_

(20)  $8 \times 4 =$  \_\_\_\_\_ (26)  $28 \div 4 =$  \_\_\_\_\_

(21)  $5 \times$  \_\_\_\_\_ = 40 (27)  $18 \div$  \_\_\_\_\_ = 3

(22) \_\_\_\_\_  $\times 6 = 60$  (28) \_\_\_\_\_  $\div 4 = 3$

# Number Knowledge Progress Assessment 4

Practical / oral assessment: **Ask** each question as outlined below. **Record** the results by circling yes or no

	Practical / Oral Questions (Supply your child with some paper)	Result (circle)																																																																																										
1	<b>Skip counting</b> in <b>3's, 4's, 5's</b> and <b>6's</b> , ask your child to <b>recite</b> a <b>forward</b> and <b>backward</b> sequence of at least the first <b>10 multiples</b> for each number.	yes / no																																																																																										
2	<b>Skip counting</b> in <b>3's, 4's, 5's</b> and <b>6's</b> , ask your child to <b>write</b> a <b>forward</b> and <b>backward</b> sequence of at least the first <b>10 multiples</b> for each number.	yes / no																																																																																										
3	<b>Write 5 decimal numbers</b> in a mixed order. Ask your child to <b>rewrite</b> these decimal numbers in <b>order</b> from <b>smallest</b> to <b>largest</b> or <b>largest</b> to <b>smallest</b> . Repeat with up to 10 different numerals.	yes / no																																																																																										
4	<b>Write</b> up to <b>10</b> 2, 3, 4 or 5 digit numbers and ask your child to <b>round</b> each number to the <b>nearest 10, 100</b> or <b>1000</b> .	yes / no																																																																																										
5	<b>Numeracy facts up to 10.</b>  Tick each correct answer. <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th></th> <th>✓</th> <th></th> <th>✓</th> <th></th> <th>✓</th> <th></th> <th>✓</th> </tr> </thead> <tbody> <tr> <td>28 - 3 = 25</td> <td></td> <td>13 + 4 = 17</td> <td></td> <td>31 + 3 = 34</td> <td></td> <td>24 - 2 = 22</td> <td></td> </tr> <tr> <td>2 + 37 = 39</td> <td></td> <td>30 - 9 = 21</td> <td></td> <td>25 - 2 = 23</td> <td></td> <td>7 + 31 = 38</td> <td></td> </tr> <tr> <td>23 - 2 = 21</td> <td></td> <td>4 + 25 = 29</td> <td></td> <td>2 + 24 = 26</td> <td></td> <td>29 - 6 = 23</td> <td></td> </tr> <tr> <td>44 + 1 = 45</td> <td></td> <td>37 - 2 = 35</td> <td></td> <td>18 - 2 = 16</td> <td></td> <td>34 + 4 = 38</td> <td></td> </tr> <tr> <td>30 - 6 = 24</td> <td></td> <td>28 + 2 = 30</td> <td></td> <td>23 + 7 = 30</td> <td></td> <td>29 - 8 = 21</td> <td></td> </tr> <tr> <td>3 + 23 = 26</td> <td></td> <td>36 - 5 = 31</td> <td></td> <td>37 - 6 = 31</td> <td></td> <td>5 + 35 = 40</td> <td></td> </tr> </tbody> </table>		✓		✓		✓		✓	28 - 3 = 25		13 + 4 = 17		31 + 3 = 34		24 - 2 = 22		2 + 37 = 39		30 - 9 = 21		25 - 2 = 23		7 + 31 = 38		23 - 2 = 21		4 + 25 = 29		2 + 24 = 26		29 - 6 = 23		44 + 1 = 45		37 - 2 = 35		18 - 2 = 16		34 + 4 = 38		30 - 6 = 24		28 + 2 = 30		23 + 7 = 30		29 - 8 = 21		3 + 23 = 26		36 - 5 = 31		37 - 6 = 31		5 + 35 = 40		yes / no																																		
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28 - 3 = 25		13 + 4 = 17		31 + 3 = 34		24 - 2 = 22																																																																																						
2 + 37 = 39		30 - 9 = 21		25 - 2 = 23		7 + 31 = 38																																																																																						
23 - 2 = 21		4 + 25 = 29		2 + 24 = 26		29 - 6 = 23																																																																																						
44 + 1 = 45		37 - 2 = 35		18 - 2 = 16		34 + 4 = 38																																																																																						
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3 + 23 = 26		36 - 5 = 31		37 - 6 = 31		5 + 35 = 40																																																																																						
6	<b>Numeracy facts 11 to 18.</b>  Tick each correct answer. <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th></th> <th>✓</th> <th></th> <th>✓</th> <th></th> <th>✓</th> </tr> </thead> <tbody> <tr> <td>24 - 15 = 22</td> <td></td> <td>12 + 9 = 21</td> <td></td> <td>9 + 14 = 23</td> <td></td> </tr> <tr> <td>32 - 5 = 27</td> <td></td> <td>21 - 9 = 12</td> <td></td> <td>41 - 8 = 33</td> <td></td> </tr> <tr> <td>19 + 7 = 26</td> <td></td> <td>4 + 13 = 22</td> <td></td> <td>15 + 6 = 21</td> <td></td> </tr> <tr> <td>26 - 7 = 19</td> <td></td> <td>32 - 8 = 24</td> <td></td> <td>24 - 7 = 17</td> <td></td> </tr> <tr> <td>9 + 19 = 28</td> <td></td> <td>17 + 6 = 23</td> <td></td> <td>8 + 17 = 25</td> <td></td> </tr> <tr> <td>48 - 9 = 39</td> <td></td> <td>23 - 6 = 17</td> <td></td> <td>43 - 8 = 35</td> <td></td> </tr> <tr> <td>14 + 7 = 21</td> <td></td> <td>6 + 18 = 24</td> <td></td> <td>16 + 6 = 22</td> <td></td> </tr> <tr> <td>21 - 7 = 14</td> <td></td> <td>44 - 8 = 36</td> <td></td> <td>22 - 3 = 19</td> <td></td> </tr> <tr> <td>8 + 18 = 26</td> <td></td> <td>19 + 6 = 25</td> <td></td> <td>8 + 16 = 24</td> <td></td> </tr> <tr> <td>36 - 8 = 28</td> <td></td> <td>25 - 6 = 19</td> <td></td> <td>38 - 9 = 29</td> <td></td> </tr> </tbody> </table>		✓		✓		✓	24 - 15 = 22		12 + 9 = 21		9 + 14 = 23		32 - 5 = 27		21 - 9 = 12		41 - 8 = 33		19 + 7 = 26		4 + 13 = 22		15 + 6 = 21		26 - 7 = 19		32 - 8 = 24		24 - 7 = 17		9 + 19 = 28		17 + 6 = 23		8 + 17 = 25		48 - 9 = 39		23 - 6 = 17		43 - 8 = 35		14 + 7 = 21		6 + 18 = 24		16 + 6 = 22		21 - 7 = 14		44 - 8 = 36		22 - 3 = 19		8 + 18 = 26		19 + 6 = 25		8 + 16 = 24		36 - 8 = 28		25 - 6 = 19		38 - 9 = 29		yes / no																								
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Number Knowledge - the key to success!



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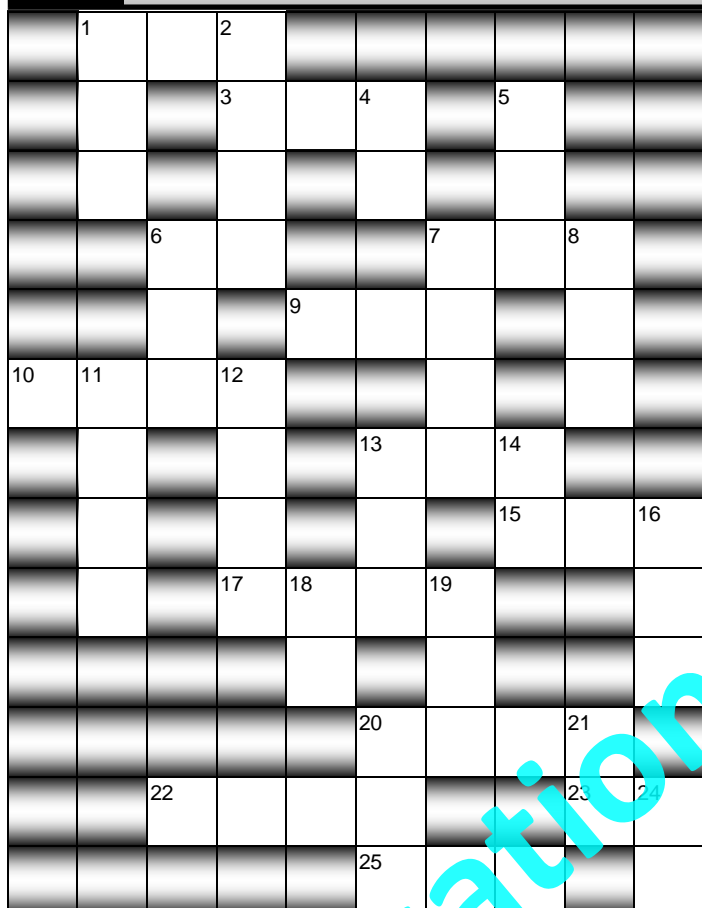
# Curriculum Strand Worksheets Section

(Level 2 / 3)

## Number & Algebra, Measurement & Geometry, and Statistics Worksheets

Select **ONE** Curriculum Strand Worksheet per week  
to be completed in conjunction with  
**ONE** Number Knowledge Worksheet.

Record your selection in the table at  
the front of this resource.



## Down

- 5 seven hundred and eighty-one  
 6 three hundred and twelve  
 7 five thousand, six hundred and fifty-one  
 8 nine hundred and seventy-five  
 11 six thousand, seven hundred and thirty-eight  
 12 four thousand, one hundred and ninety-three  
 13 four hundred and seventy-nine  
 14 fifty-seven  
 16 one hundred and sixty-one  
 18 sixty-seven  
 19 one hundred and forty-two  
 20 four hundred and eighteen  
 21 thirty-six  
 24 ninety-seven

Write these numerals  
as number words.



- (1) Use the **across** and **down** clues to complete this number cross involving whole numbers.

## Across

- 1 eight hundred and forty-one  
 3 five hundred and eighty-three  
 6 thirty-four  
 7 five hundred and nineteen  
 9 three hundred and sixteen  
 10 seven thousand, six hundred and twenty-four  
 13 four hundred and fifteen  
 15 seven hundred and twenty-one  
 17 three thousand, six hundred and ninety-one  
 20 four thousand, two hundred and thirteen  
 22 two thousand, one hundred and thirty-one  
 23 sixty-nine  
 25 eight hundred and forty-five

## Down

- 1 eight hundred and ninety-six  
 2 one thousand, five hundred and fourteen  
 4 thirty-nine

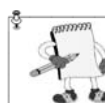
(2) 67

(3) 94

(4) 586

(5) 2031

(6) 6702



The aim of this activity sheet is to read number words for 2, 3 or 4-digit numerals and write numerals as number words.

## Suggested extension activity:

Say aloud or write any 2, 3 or 4-digit numerals in number words and ask your child to write it as a numeral. Concentrate on pairs where the digits have been reversed. Example: 423, 324 ..... 147, 741 ... etc.

Write any 2, 3 or 4-digit number as numerals and ask your child to say, then write the numeral as number words.

Sign when  
completed:

1		•		2					
				3			•		
				•					
		4			•	5			
				6		•		7	
8									
		9			10			•	
•				11		12	•		
13		•							
				•					
				14					
15		•							

**Write** these decimals  
as **number words**.



(2) **7.8**

(3) 6.03

(4) 74.9

(5) 52.76

(6) 100.23

(7) 1518.9

(8) 0.513

(9) 7.009

(10) 0.006



The aim of this activity sheet is to read and write decimals as numerals and number words.

**Suggested extension activity:**

Say aloud or write any 2, 3 or 4-digit decimal in number words and ask your child to write it as a numeral. Concentrate on pairs where the digits have been reversed. *Example: 42.3, 32.4 ..... 1.47, 7.41 ... etc.*

Write any 2, 3 or 4-digit number as numerals and ask your child to say, then write the numeral as number words.

Sign when  
completed:

(1) Use the **across** and **down** clues to complete this number cross involving decimals.

### Across

- 1 seventy-three point three
- 2
- 3 six hundred and ninety-two point eight
- 4 three hundred and seventy-five point nine
- 5
- 6 thirty-two point seven four
- 7
- 8 one hundred and fifty-eight point one
- 9
- 10 six hundred and twenty-four point nine
- 11
- 12 fifty-two point seven seven
- 13
- 14 twenty-seven point four zero
- 15 fifty-four point zero six

## Down

- 2 three hundred and sixty-four point five
- 5 ninety-four point two five
- 7 forty-seven point two nine
- 8 two hundred and thirty-nine point five
- 9 seven hundred and four point six
- 11 sixty-seven point two six
- 12 four hundred and fifty-eight point six

There is more than one way to work out an answer. Here are some examples.

### Groupings of 10

Adding  $6 + 3 + 14$  is the same as  $20 + 3 = 23$

- (1)  $3 + 9 + 7 = \underline{\quad} + \underline{\quad} = \underline{\quad}$
- (2)  $8 + 15 + 5 = \underline{\quad} + \underline{\quad} = \underline{\quad}$
- (3)  $5 + 23 + 7 = \underline{\quad} + \underline{\quad} = \underline{\quad}$
- (4)  $5 + 8 + 45 = \underline{\quad} + \underline{\quad} = \underline{\quad}$

### Using known doubles

Adding  $8 + 9$  is the same as  $8 + 8 + 1 = 17$   
or  $9 + 9 - 1 = 17$

- (5)  $7 + 8 = 7 + 7 + \underline{\quad} = \underline{\quad}$
- (6)  $8 + 9 = \underline{\quad} + 8 + \underline{\quad} = \underline{\quad}$
- (7)  $14 + 9 = 9 + \underline{\quad} + \underline{\quad} = \underline{\quad}$
- (8)  $20 + 27 = \underline{\quad} + \underline{\quad} + \underline{\quad} = \underline{\quad}$

### Round to make 10 or multiple of 10

Add  $19 + 7$  (add 1 to 19, subtract 1 from 7)

Answer:  $19 + 7 = 20 + 6 = 26$

- (9)  $9 + 6 = 10 + \underline{\quad} = \underline{\quad}$
- (10)  $8 + 17 = \underline{\quad} + \underline{\quad} = \underline{\quad}$
- (11)  $26 + 8 = \underline{\quad} + \underline{\quad} = \underline{\quad}$
- (12)  $9 + 58 = \underline{\quad} + \underline{\quad} = \underline{\quad}$

### Adding or subtracting 10's and 1's

Example: Add  $23 + 15$   
add 10's ...  $20 + 10 = 30$ , add 1's ...  $3 + 5 = 8$   
Answer:  $30 + 8 = 38$

- (13)  $34 + 13$  is the same as ...  
 $\underline{\quad} + 10 + \underline{\quad} + 3 = \underline{\quad}$
- (14)  $45 + 24$  is the same as ...  
 $\underline{\quad} + \underline{\quad} + \underline{\quad} + \underline{\quad} = \underline{\quad}$
- (15)  $27 - 14$  is the same as ...  
 $20 - \underline{\quad} + \underline{\quad} - 4 = \underline{\quad}$
- (16)  $59 - 26$  is the same as ...  
 $\underline{\quad} - \underline{\quad} + \underline{\quad} - \underline{\quad} = \underline{\quad}$

### Splitting numbers to make '10'

Subtract  $23 - 6$  ( $23 = 20 + 3$  and  $20 - 6 = 14$ )

Answer:  $14 + 3 = 17$

- (17)  $75 - 6$  is the same as ...  
 $70 - 6 + \underline{\quad} = \underline{\quad}$
- (18)  $32 - 6$  is the same as ...  
 $\underline{\quad} - 6 + \underline{\quad} = \underline{\quad}$
- (19)  $83 - 8$  is the same as ...  
 $80 - \underline{\quad} + \underline{\quad} = \underline{\quad}$
- (20)  $54 - 5$  is the same as ...  
 $\underline{\quad} - \underline{\quad} + \underline{\quad} = \underline{\quad}$

### Don't subtract ... add

$26 - 7 = \bullet$  is the same as  $7 + \bullet = 26$

Use 'tidy' numbers to work this out

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30

Answer:  $3 + 10 + 6 = 19$

- (21)  $34 - 9 = \bullet$  is the same as  $9 + \bullet = 34$   
 $\bullet = \underline{\quad} + 20 + \underline{\quad} = \underline{\quad}$
- (22)  $45 - 8 = \bullet$  is the same as  $8 + \bullet = 45$   
 $\bullet = \underline{\quad} + \underline{\quad} + \underline{\quad} = \underline{\quad}$
- (23)  $52 - 7 = \bullet$  is the same as  $7 + \bullet = 52$   
 $\bullet = \underline{\quad} + \underline{\quad} + \underline{\quad} = \underline{\quad}$
- (24)  $67 - 9 = \bullet$  is the same as  $9 + \bullet = 67$   
 $\bullet = \underline{\quad} + \underline{\quad} + \underline{\quad} = \underline{\quad}$
- (25)  $48 - 9 = \bullet$  is the same as  $9 + \bullet = 48$   
 $\bullet = \underline{\quad} + \underline{\quad} + \underline{\quad} = \underline{\quad}$



The aim of this activity sheet is to look at different strategies that could be used to work out addition or subtraction problems.

### Suggested extension activity:

Make up similar questions that cover the basic numeracy facts at the back of this resource. These are **key number knowledge facts**.

The strategies used on this worksheet are only a suggestion. Your child may not need to use some or all of these strategies and may have strategies of their own. Encourage them to talk about how they work out their answers. Remember that working out the answer with confidence is more important than the strategy used.

Sign when

completed: \_\_\_\_\_

Let's test your skills again ... how quickly can you **write in** the missing numbers?



- (1) 19 + \_\_\_\_\_ = 21
- (2) \_\_\_\_\_ - 6 = 16
- (3) \_\_\_\_\_ + 25 = 33
- (4) 42 - \_\_\_\_\_ = 35
- (5) 28 + \_\_\_\_\_ = 31
- (6) \_\_\_\_\_ - 4 = 58
- (7) \_\_\_\_\_ + 5 = 41
- (8) 22 - \_\_\_\_\_ = 19
- (9) 36 + \_\_\_\_\_ = 43
- (10) \_\_\_\_\_ - 7 = 34
- (11) \_\_\_\_\_ + 57 = 62
- (12) 41 - \_\_\_\_\_ = 35
- (13) 35 + \_\_\_\_\_ = 44
- (14) \_\_\_\_\_ - 9 = 36
- (15) \_\_\_\_\_ + 48 = 53
- (16) 43 - \_\_\_\_\_ = 36
- (17) 29 + \_\_\_\_\_ = 36
- (18) \_\_\_\_\_ - 9 = 24
- (19) \_\_\_\_\_ + 38 = 44
- (20) 45 - \_\_\_\_\_ = 37
- (21) 27 + \_\_\_\_\_ = 34
- (22) \_\_\_\_\_ - 9 = 26
- (23) \_\_\_\_\_ + 28 = 36
- (24) 47 - \_\_\_\_\_ = 38
- (25) 69 + \_\_\_\_\_ = 78

(26)

Add up all the numbers in this box.

25	8	36	
4	3	31	
9	5	12	
			Total

Word problems.

(27)

You have 9 red blocks and 27 blue blocks, how many blocks do you have altogether?



(28)

For doing jobs around home you were paid \$17 and \$8. How much money did you earn?



(29)

If you spent \$9 and \$17 on toys, how much money did you spend altogether?



(30)

You have 17 red and blue blocks. If 9 blocks are blue, how many blocks are red?



(31)

You have \$16 and buy a drink. If you have \$8 left, how much did the drink cost?



The aim of this activity sheet is to revise all addition and subtraction combinations for 1 and 2-digit numbers involving carrying.

#### Suggested extension activity:

Have a supply of objects, such as blocks, available so that you can model each addition and subtraction if required.

Make up similar questions that cover the basic numeracy facts on this activity sheet.

Example:  $6 + ? = 21$  can be rewritten as  $21 - 6 = ?$  ... etc.

In the number box (Q26), look for pairs of numbers that add to a multiple of 10 ...  $16 + 4 = 20$ , then 20 plus 10 equals 30 etc....

Sign when completed: \_\_\_\_\_



Write these whole numbers and decimals in **order of smallest to largest**.



- (1) 

952
-----

1023
------

76
----

15013
-------

- (2) 

22.3
------

8.7
-----

1.932
-------

183.4
-------

0.487
-------

- (3) 

1.73
------

1.75
------

1.71
------

1.74
------

1.79
------

1.72
------

- (4) If you **write** these numbers in order from **smallest to largest**,

63.01
-------

1.397
-------

1141.9
--------

427.3
-------

0.572
-------

... which number is first? \_\_\_\_\_

... which number is last? \_\_\_\_\_

... which number is in the middle? \_\_\_\_\_

Write these numbers in **order of largest to smallest**.



- (5) 

234
-----

1115
------

39
----

793
-----

4395
------

- (6) 

1.23
------

1.29
------

1.24
------

1.27
------

1.21
------

1.28
------

- (7) If you **write** these numbers in order from **largest to smallest**,

3.98
------

0.169
-------

1682
------

37.26
-------

149.5
-------

... which number is first? \_\_\_\_\_

... which number is last? \_\_\_\_\_

... which number is in the middle? \_\_\_\_\_

Kaylee competed in the long jump. Her distances jumped are in the table.



Jump	1	2	3	4	5
Distance	3.65m	3.37m	3.48m	3.71m	3.52m

- (8) What was the distance of her longest jump? \_\_\_\_\_

- (9) What was the distance of her shortest jump? \_\_\_\_\_

- (10) Write the jump distances in **order** from longest jump to shortest jump.  
\_\_\_\_\_

The results of a pumpkin growing competition are shown in this table.



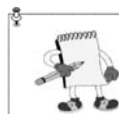
Pumpkin	A	B	C	D	E
Weight	10.36kg	9.37kg	15.07kg	18.32kg	14.95kg

- (11) What was the weight of the lightest pumpkin? \_\_\_\_\_

- (12) What was the weight of the heaviest pumpkin? \_\_\_\_\_

- (13) What was the weight of the 3rd heaviest pumpkin? \_\_\_\_\_

- (14) Write the weight of these pumpkins in **order** of lightest to heaviest.  
\_\_\_\_\_



The aim of this activity sheet is to learn to order numbers, including decimals, from smallest to largest or largest to smallest and revise words such as first, last, most, least, longest, shortest, lightest, heaviest, etc.

#### Suggested extension activity:

Money is a good way to represent decimals. Using up to six different money totals, ask your child to order the totals from smallest to largest.

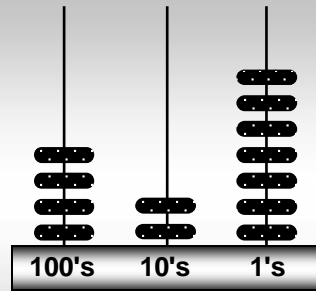
Example: \$5.40, \$4.50, \$12.80, \$1.60 etc.

Make up similar word problems as above that involve decimals and ask your child to order each group.

Sign when completed: \_\_\_\_\_

Lucy placed some rings on an abacus to show the number 427.

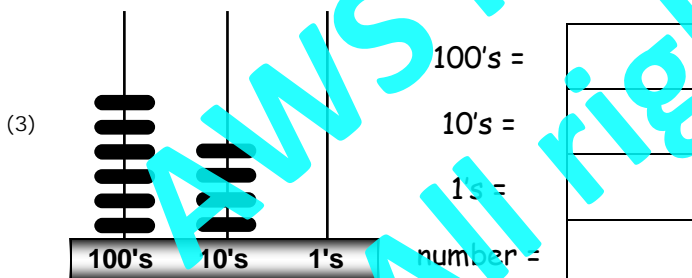
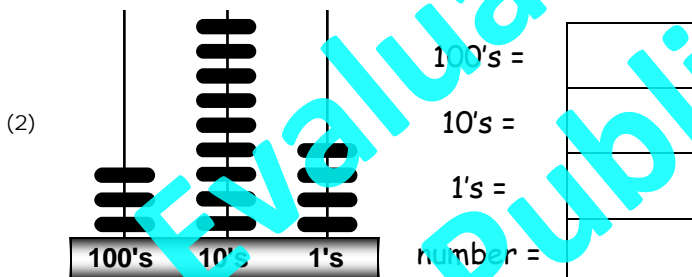
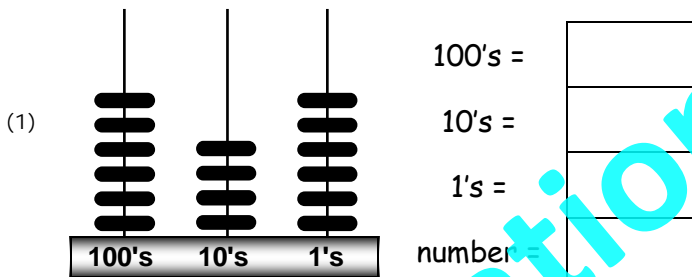
How many rings are on each peg?



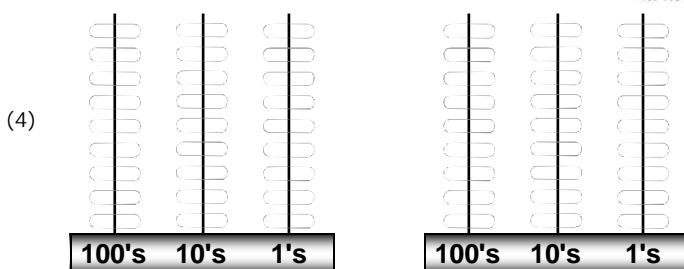
Answer:

Four 100's, two 10's and seven 1's.

Count the number of rings on each peg. What number is shown on each abacus?



Colour in rings on each abacus to show the number written below each abacus.



391

450

Numbers can also be **renamed** into 100's, 10's and 1's.

Example:  $437 = 4 \text{ 100's} + 3 \text{ 10's} + 7 \text{ 1's}$



(5)  $573 = \square \text{ 100's} + \square \text{ 10's} + \square \text{ 1's}$

(6)  $289 = \square \text{ 100's} + \square \text{ 10's} + \square \text{ 1's}$

(7)  $614 = \square \text{ 100's} + \square \text{ 10's} + \square \text{ 1's}$

(8)  $960 = \square \text{ 100's} + \square \text{ 10's} + \square \text{ 1's}$

(9)  $408 = \square \text{ 100's} + \square \text{ 10's} + \square \text{ 1's}$

The place a digit has in a number will affect its value.

Example: In 950, the 5 has a place value of 10 and means 50.



What is the place value of the **BOLD** digit in each number and what does it mean?

		Place value	means
(10)	<b>2</b> 80		200
(11)	5 <b>7</b> 2	10's	
(12)	29 <b>3</b>		
(13)	<b>5</b> 09		
(14)	8 <b>1</b> 6		
(15)	<b>6</b> 20		
(16)	3 <b>7</b> 8		
(17)	<b>4</b> 91		



The aim of this activity sheet is to understand place value for 3-digit numbers. i.e. hundreds, tens and units.

#### Suggested extension activity:

Find three different coloured blocks or objects, one to represent 100's, one to represent 10's and one to represent 1's. Ask your child to model any 3-digit number using the blocks.

Example: For 172 ... 1 100's block, 7 10's blocks and 2 1's blocks.

Ask your child how many 100's, 10's and 1's, in any 3-digit number.

Sign when completed: \_\_\_\_\_

**Rounding a money total to the nearest \$10** can make adding up money less difficult.

*Example:* \$57 is almost \$60, \$72 is just over \$70

Round **UP** if the end number is 5, 6, 7, 8 or 9.

Round **DOWN** if the number is 0, 1, 2, 3 or 4.

**Round** these money amounts to the nearest \$10 or \$100, then work out an answer.

Add \$29 + \$32 ... Rounded \$30 + \$30 = \$60

Add \$117 + \$769 ... Rounded \$100 + \$800 = \$900

The answer you get is called an **estimate** because it is not the exact answer.



**Round each money amount to the nearest \$10.**

- |           |            |
|-----------|------------|
| (1) \$48  | (9) \$364  |
| (2) \$92  | (10) \$876 |
| (3) \$87  | (11) \$407 |
| (4) \$64  | (12) \$753 |
| (5) \$126 | (13) \$196 |
| (6) \$363 | (14) \$645 |
| (7) \$489 | (15) \$748 |
| (8) \$921 | (16) \$996 |

When **rounding** a number to the nearest 100, look at the 10's place value number.

*Example:* 767 rounds **up** to 800. (5, 6, 7, 8, 9 ↑)  
but 437 rounds **down** to 400. (1, 2, 3, 4 ↓)

**Round these numbers to the nearest 100.**

- |          |          |
|----------|----------|
| (17) 340 | (25) 729 |
| (18) 760 | (26) 806 |
| (19) 190 | (27) 477 |
| (20) 372 | (28) 303 |
| (21) 164 | (29) 826 |
| (22) 783 | (30) 945 |
| (23) 339 | (31) 798 |
| (24) 591 | (32) 986 |

**Round each money amount to the nearest \$10, then work out an estimated answer.**

(33) Add \$41 + \$59

\_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_

(34) Subtract \$92 - \$69

\_\_\_\_\_ - \_\_\_\_\_ = \_\_\_\_\_

(35) Add \$78 + \$23

\_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_

(36) Subtract \$96 - \$54

\_\_\_\_\_ - \_\_\_\_\_ = \_\_\_\_\_

**Round each money amount to the nearest \$100, then work out an estimated answer.**

(37) Add \$384 + \$843

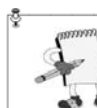
\_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_

(38) Subtract \$725 - \$579

\_\_\_\_\_ - \_\_\_\_\_ = \_\_\_\_\_

(39) Add \$680 + \$716

\_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_



The aim of this activity sheet is to round numbers to the nearest 10 or 100. Rounded numbers can be used when working out estimated answers.

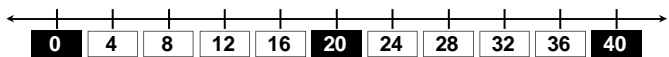
#### Suggested extension activity:

Call out money amounts of less than \$100 and ask your child to round them to the nearest \$10.00. Repeat the exercise for money amounts greater than \$100 and ask your child to round to the nearest \$100.00  
*Example:* Round \$27 to the nearest 10. Round \$286 to the nearest 100.

Ask your child to round 2, 3, 4 or more numbers to the nearest 10, then have them add them up to come up with an estimated answer.

Sign when completed: \_\_\_\_\_

This number line shows skip counting in 4's.



"What's  $4 + 4 + 4 + 4 + 4$  ..... is that the same as  $4 \times 5$ ?" asked David.



- (1) Write the missing multiples of 4 as you skip count in 4's up to 40.

4, \_\_\_\_\_, \_\_\_\_\_, 16, \_\_\_\_\_,  
\_\_\_\_\_, 28, \_\_\_\_\_, 36, \_\_\_\_\_

Work out these skip counting questions and write them as multiplication facts.

- (2)  $4 + 4 + 4 + 4 =$  \_\_\_\_\_ and is the same as  $4 \times$  \_\_\_\_\_ = \_\_\_\_\_
- (3)  $4 + 4 + 4 + 4 + 4 + 4 + 4 =$  \_\_\_\_\_ and is the same as  $4 \times$  \_\_\_\_\_ = \_\_\_\_\_
- (4)  $4 + 4 + 4 + 4 + 4 =$  \_\_\_\_\_ and is the same as  $4 \times$  \_\_\_\_\_ = \_\_\_\_\_
- (5)  $4 + 4 =$  \_\_\_\_\_ and is the same as  $4 \times$  \_\_\_\_\_ = \_\_\_\_\_
- (6)  $4 + 4 + 4 + 4 + 4 + 4 + 4 + 4 =$  \_\_\_\_\_ and is the same as  $4 \times$  \_\_\_\_\_ = \_\_\_\_\_
- (7)  $4 + 4 + 4 =$  \_\_\_\_\_ and is the same as  $4 \times$  \_\_\_\_\_ = \_\_\_\_\_
- (8)  $4 + 4 + 4 + 4 + 4 + 4 + 4 + 4 + 4 =$  \_\_\_\_\_ and is the same as  $4 \times$  \_\_\_\_\_ = \_\_\_\_\_
- (9)  $4 + 4 + 4 + 4 + 4 + 4 =$  \_\_\_\_\_ and is the same as  $4 \times$  \_\_\_\_\_ = \_\_\_\_\_
- (10)  $4 + 4 + 4 + 4 + 4 + 4 + 4 + 4 + 4 + 4 =$  \_\_\_\_\_ and is the same as  $4 \times$  \_\_\_\_\_ = \_\_\_\_\_

Write in the missing numbers for the 4x multiplication facts.



- (11)  $1 \times 4 =$  \_\_\_\_\_ (16)  $4 \times 5 =$  \_\_\_\_\_
- (12)  $4 \times 4 =$  \_\_\_\_\_ (17)  $2 \times 4 =$  \_\_\_\_\_
- (13)  $6 \times 4 =$  \_\_\_\_\_ (18)  $4 \times 7 =$  \_\_\_\_\_
- (14)  $4 \times 9 =$  \_\_\_\_\_ (19)  $3 \times 4 =$  \_\_\_\_\_
- (15)  $10 \times 4 =$  \_\_\_\_\_ (20)  $4 \times 3 =$  \_\_\_\_\_

"What number multiplied by 4 gives me an answer of 20?" asked Jodie.

Written as  $4 \times$  \_\_\_\_\_ = 20, the answer is 5.

Write in the missing numbers for these 4x multiplication facts.



- (21) \_\_\_\_\_  $\times 4 = 8$  (26)  $4 \times$  \_\_\_\_\_ = 16
- (22)  $4 \times$  \_\_\_\_\_ = 32 (27) \_\_\_\_\_  $\times 4 = 4$
- (23) \_\_\_\_\_  $\times 4 = 12$  (28)  $4 \times$  \_\_\_\_\_ = 20
- (24)  $4 \times$  \_\_\_\_\_ = 28 (29) \_\_\_\_\_  $\times 4 = 40$
- (25) \_\_\_\_\_  $\times 4 = 24$  (30)  $4 \times$  \_\_\_\_\_ = 36

- (31) If one book costs \$4.00, how much would 7 books cost?

\_\_\_\_\_  $\times$  \_\_\_\_\_ = \_\_\_\_\_



- (32) If one ice-cream costs \$4.00, how much would 9 ice-creams cost?

\_\_\_\_\_  $\times$  \_\_\_\_\_ = \_\_\_\_\_



The aim of this activity sheet is to use skip counting in 4's to introduce the 4x multiplication facts. Multiplication is 'short-hand' for repeated addition of the same number.

#### Suggested extension activity:

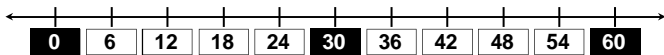
Revise skip counting in 4's until your child can successfully and quickly count in 4's up to at least 40. These are called the multiples of 4. Ask your child each multiplication fact until they know them all.

Example: What is 4 multiplied by 5? ..... 4, 8, 12, 16, 20.

At this stage, your child may still skip count to get the answer.

Sign when completed: \_\_\_\_\_

This number line shows skip counting in 6's.



"What's  $6 + 6 + 6 + 6 + 6$  ..... is that the same as  $6 \times 5$ ?" asked David.



- (1) Write the missing multiples of 6 as you skip count in 6's up to 60.

6, \_\_\_\_\_, \_\_\_\_\_, 24, \_\_\_\_\_,

\_\_\_\_\_, 42, \_\_\_\_\_, 54, \_\_\_\_\_

Work out these skip counting questions and write them as multiplication facts.

- (2)  $6 + 6 + 6 + 6 =$  \_\_\_\_\_ and is the same as  $6 \times$  \_\_\_\_\_ = \_\_\_\_\_
- (3)  $6 + 6 + 6 + 6 + 6 + 6 + 6 =$  \_\_\_\_\_ and is the same as  $6 \times$  \_\_\_\_\_ = \_\_\_\_\_
- (4)  $6 + 6 + 6 + 6 + 6 =$  \_\_\_\_\_ and is the same as  $6 \times$  \_\_\_\_\_ = \_\_\_\_\_
- (5)  $6 + 6 =$  \_\_\_\_\_ and is the same as  $6 \times$  \_\_\_\_\_ = \_\_\_\_\_
- (6)  $6 + 6 + 6 + 6 + 6 + 6 + 6 + 6 =$  \_\_\_\_\_ and is the same as  $6 \times$  \_\_\_\_\_ = \_\_\_\_\_
- (7)  $6 + 6 + 6 =$  \_\_\_\_\_ and is the same as  $6 \times$  \_\_\_\_\_ = \_\_\_\_\_
- (8)  $6 + 6 + 6 + 6 + 6 + 6 + 6 + 6 + 6 =$  \_\_\_\_\_ and is the same as  $6 \times$  \_\_\_\_\_ = \_\_\_\_\_
- (9)  $6 + 6 + 6 + 6 + 6 + 6 =$  \_\_\_\_\_ and is the same as  $6 \times$  \_\_\_\_\_ = \_\_\_\_\_
- (10)  $6 + 6 + 6 + 6 + 6 + 6 + 6 + 6 + 6 + 6 =$  \_\_\_\_\_ and is the same as  $6 \times$  \_\_\_\_\_ = \_\_\_\_\_

Write in the missing numbers for the  $6 \times$  multiplication facts.



- |                            |                           |
|----------------------------|---------------------------|
| (11) $1 \times 6 =$ _____  | (16) $6 \times 5 =$ _____ |
| (12) $6 \times 4 =$ _____  | (17) $2 \times 6 =$ _____ |
| (13) $6 \times 6 =$ _____  | (18) $6 \times 7 =$ _____ |
| (14) $6 \times 9 =$ _____  | (19) $3 \times 6 =$ _____ |
| (15) $10 \times 6 =$ _____ | (20) $6 \times 8 =$ _____ |

"What number multiplied by 6 gives me an answer of 18?" asked Jodie.

Written as  $6 \times$  \_\_\_\_\_ = 18, the answer is 3.

Write in the missing numbers for these  $6 \times$  multiplication facts.



- |                            |                            |
|----------------------------|----------------------------|
| (21) _____ $\times 6 = 12$ | (26) $6 \times$ _____ = 24 |
| (22) $6 \times$ _____ = 48 | (27) _____ $\times 6 = 60$ |
| (23) _____ $\times 6 = 18$ | (28) $6 \times$ _____ = 30 |
| (24) $6 \times$ _____ = 42 | (29) _____ $\times 6 = 6$  |
| (25) _____ $\times 6 = 36$ | (30) $6 \times$ _____ = 54 |

- (31) If one book costs \$6.00, how much would 7 books cost?

\_\_\_\_\_  $\times$  \_\_\_\_\_ = \_\_\_\_\_



- (32) If one ice-cream costs \$6.00, how much would 10 ice-creams cost?

\_\_\_\_\_  $\times$  \_\_\_\_\_ = \_\_\_\_\_



The aim of this activity sheet is to use skip counting in 6's to introduce the  $6 \times$  multiplication facts. Multiplication is 'short-hand' for repeated addition of the same number.

#### Suggested extension activity:

Revise skip counting in 6's until your child can successfully and quickly count in 6's up to at least 60. These are called the multiples of 6. Ask your child each multiplication fact until they know them all.

Example: What is 6 multiplied by 5? ..... 6, 12, 18, 24, 30.

At this stage, your child may still skip count to get the answer.

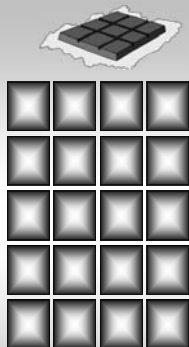
Sign when completed: \_\_\_\_\_



This 20 piece chocolate block is to be shared amongst Jodie's friends.

"We will all get 4 pieces each," said Jodie.

How many friends is Jodie sharing her chocolate with?

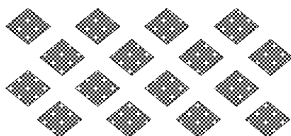


Answer: 5 friends, written as  $20 \div 4 = 5$

How many **groups of 4** can you get from each group of shapes?

Write each question as a **division fact**.

(1)



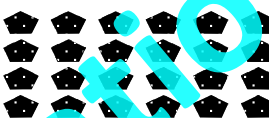
$$16 \div 4 =$$

Total number of shapes

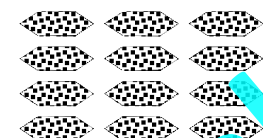
Number of groups of 4

(2)

$$\div 4 =$$



(3)



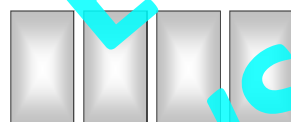
$$\div 4 =$$

(4)

$$\div 4 =$$



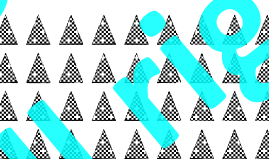
(5)



$$\div 4 =$$

(6)

$$\div 4 =$$



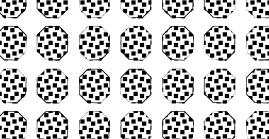
(7)



$$\div 4 =$$

(8)

$$\div 4 =$$



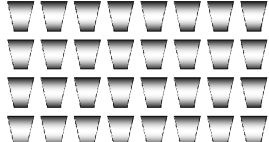
(9)



$$\div 4 =$$

(10)

$$\div 4 =$$



Use this 6 x 10 grid to help work out how many **groups of 6** there would be in each shape.

Write each question as a **division fact**.



1	2	3	4	5	6	7	8	9	10
2									
3									
4									
5									
6									

Total number of squares in each shape

Number of groups

- (11) 18 squares 18  $\div 6 =$
- (12) 36 squares  $\div 6 =$
- (13) 54 squares  $\div 6 =$
- (14) 24 squares  $\div 6 =$
- (15) 42 squares  $\div 6 =$
- (16) 12 squares  $\div 6 =$
- (17) 60 squares  $\div 6 =$
- (18) 48 squares  $\div 6 =$
- (19) 6 squares  $\div 6 =$
- (20) 30 squares  $\div 6 =$

Word problems.

- (21) If 4 books cost \$28.00, how much does 1 book cost?



$$\div =$$

- (22) If 6 ice-creams cost \$24.00, how much does 1 ice-cream cost?



$$\div =$$

Make up some more word problems, as above.



The aim of this activity sheet is to introduce division by working out how many known sized 'groups' can go into a given number of objects or squares.

#### Suggested extension activity:

Division and multiplication are opposite operations. If your child knows the multiplication facts, reverse them to learn division facts.

Example: "If 4 multiplied by 7 is 28, then ... 28 divided by 4 is 7."

Using objects if required, ask your child to 'group' the objects to model all 4x and 6x divisions facts, as done on this worksheet.

Sign when completed:



When working with large numbers, there is more than one way to work out an answer. Here are some strategies.

### Using place value

Working out  $63 \times 5$  is the same as ...  
 $(60 \times 5) + (3 \times 5) = 300 + 15 = 315$



### Doubling and halving factors

Working out  $16 \times 5$  is the same as ...  
 $8 \times 10 = 80$  ( $\frac{1}{2} \times 16 = 8$ ,  $2 \times 5 = 10$ )



(1)  $85 \times 3 = (80 \times \underline{\quad}) + (5 \times \underline{\quad})$

$= \underline{\quad} + \underline{\quad} = \underline{\quad}$

(2)  $74 \times 5 = (\underline{\quad} \times \underline{\quad}) + (\underline{\quad} \times \underline{\quad})$

$= \underline{\quad} + \underline{\quad} = \underline{\quad}$

(3)  $93 \times 2 = (\underline{\quad} \times \underline{\quad}) + (\underline{\quad} \times \underline{\quad})$

$= \underline{\quad} + \underline{\quad} = \underline{\quad}$

(4)  $38 \times 6 = (30 \times \underline{\quad}) + (8 \times \underline{\quad})$

$= \underline{\quad} + \underline{\quad} = \underline{\quad}$

(5)  $67 \times 4 = (\underline{\quad} \times \underline{\quad}) + (\underline{\quad} \times \underline{\quad})$

$= \underline{\quad} + \underline{\quad} = \underline{\quad}$

### Rounding to use 'tidy' numbers

Working out  $198 \times 3$  is the same as ...  
 $(200 \times 3) - (2 \times 3) = 600 - 6 = 594$



(6)  $397 \times 2 = (400 \times \underline{\quad}) - (3 \times \underline{\quad})$

$= \underline{\quad} - \underline{\quad} = \underline{\quad}$

(7)  $291 \times 4 = (\underline{\quad} \times \underline{\quad}) - (\underline{\quad} \times \underline{\quad})$

$= \underline{\quad} - \underline{\quad} = \underline{\quad}$

(8)  $594 \times 6 = (\underline{\quad} \times \underline{\quad}) - (\underline{\quad} \times \underline{\quad})$

$= \underline{\quad} - \underline{\quad} = \underline{\quad}$

(9)  $807 \times 3 = (800 \times \underline{\quad}) + (7 \times \underline{\quad})$

$= \underline{\quad} + \underline{\quad} = \underline{\quad}$

(10)  $903 \times 5 = (\underline{\quad} \times \underline{\quad}) + (\underline{\quad} \times \underline{\quad})$

$= \underline{\quad} + \underline{\quad} = \underline{\quad}$

(11)  $3 \times 16 = 6 \times \underline{\quad} = \underline{\quad}$

(12)  $12 \times 5 = \underline{\quad} \times \underline{\quad} = \underline{\quad}$

(13)  $4 \times 16 = \underline{\quad} \times \underline{\quad} = \underline{\quad}$

(14)  $18 \times 3 = \underline{\quad} \times \underline{\quad} = \underline{\quad}$

(15)  $5 \times 16 = \underline{\quad} \times \underline{\quad} = \underline{\quad}$

### Using written working forms

To work out  $78 \times 4$ , rewrite as ...

Firstly,  $8 \times 4 = 32$

$$\begin{array}{r} 78 \\ \times 4 \\ \hline 32 \\ \hline \end{array}$$

(Note: small 3 represents 30)

then,  $70 \times 4 = 280$  plus  $30 = 310$

$$\begin{array}{r} 78 \\ \times 4 \\ \hline 310 \\ \hline \end{array}$$



(16)  $\begin{array}{r} 93 \\ \times 2 \\ \hline \end{array}$

(19)  $\begin{array}{r} 86 \\ \times 5 \\ \hline \end{array}$

(17)  $\begin{array}{r} 87 \\ \times 3 \\ \hline \end{array}$

(20)  $\begin{array}{r} 97 \\ \times 5 \\ \hline \end{array}$

(18)  $\begin{array}{r} 65 \\ \times 4 \\ \hline \end{array}$

(21)  $\begin{array}{r} 69 \\ \times 6 \\ \hline \end{array}$



The aim of this activity sheet is to look at different strategies that could be used to work out multiplication problems.

### Suggested extension activity:

Make up similar questions that cover the basic numeracy facts at the back of this resource. These are **key number knowledge facts**.

The strategies used on this worksheet are only a suggestion. Your child may not need to use some or all of these strategies and may have strategies of their own. Encourage them to talk about how they work out their answers. Remember that working out the answer with confidence is more important than the strategy used.

Sign when completed: \_\_\_\_\_

When working with large numbers, there is more than one way to work out an answer. Here are some strategies.

### Using known multiples of 10

Working out  $64 \div 4$  is the same as ...

$$(40 \div 4) + (24 \div 4) = 10 + 6 = 16$$



$$(1) \quad 51 \div 3 = (30 \div \underline{\quad}) + (21 \div \underline{\quad})$$

$$= \underline{\quad} + \underline{\quad} = \underline{\quad}$$

$$(2) \quad 75 \div 5 = (50 \div \underline{\quad}) + (\underline{\quad} \div \underline{\quad})$$

$$= \underline{\quad} + \underline{\quad} = \underline{\quad}$$

$$(3) \quad 96 \div 6 = (\underline{\quad} \div \underline{\quad}) + (\underline{\quad} \div \underline{\quad})$$

$$= \underline{\quad} + \underline{\quad} = \underline{\quad}$$

$$(4) \quad 76 \div 4 = (\underline{\quad} \div \underline{\quad}) + (\underline{\quad} \div \underline{\quad})$$

$$= \underline{\quad} + \underline{\quad} = \underline{\quad}$$

$$(5) \quad 102 \div 6 = (\underline{\quad} \div \underline{\quad}) + (\underline{\quad} \div \underline{\quad})$$

$$= \underline{\quad} + \underline{\quad} = \underline{\quad}$$

### Rounding up or down to use 'tidy' numbers

Working out  $95 \div 5$  is the same as ...

$$(100 \div 5) - (5 \div 5) = 20 - 1 = 19$$



$$(6) \quad 398 \div 2 = (400 \div \underline{\quad}) - (2 \div \underline{\quad})$$

$$= \underline{\quad} - \underline{\quad} = \underline{\quad}$$

$$(7) \quad 475 \div 5 = (\underline{\quad} \div \underline{\quad}) - (\underline{\quad} \div \underline{\quad})$$

$$= \underline{\quad} - \underline{\quad} = \underline{\quad}$$

$$(8) \quad 588 \div 6 = (\underline{\quad} \div \underline{\quad}) - (\underline{\quad} \div \underline{\quad})$$

$$= \underline{\quad} - \underline{\quad} = \underline{\quad}$$

$$(9) \quad 824 \div 4 = (800 \div \underline{\quad}) + (\underline{\quad} \div \underline{\quad})$$

$$= \underline{\quad} + \underline{\quad} = \underline{\quad}$$

$$(10) \quad 618 \div 3 = (\underline{\quad} \div \underline{\quad}) + (\underline{\quad} \div \underline{\quad})$$

$$= \underline{\quad} + \underline{\quad} = \underline{\quad}$$

### Halving factors

Working out  $208 \div 16$  is the same as ...

$$104 \div 8 \dots 52 \div 4 \dots 26 \div 2 = 13$$



$$(11) \quad 120 \div 12 = \underline{\quad} \div 6 = \underline{\quad} \div 3 = \underline{\quad}$$

$$(12) \quad 96 \div 16 = \underline{\quad} \div 8 = \underline{\quad} \div \underline{\quad} = \underline{\quad}$$

$$(13) \quad 680 \div 40 = \underline{\quad} \div \underline{\quad} = \underline{\quad} \div \underline{\quad} = \underline{\quad}$$

$$(14) \quad 288 \div 24 = \underline{\quad}$$

$$(15) \quad 448 \div 32 = \underline{\quad}$$

### Using written working forms

To work out  $96 \div 4$ , rewrite as ...

$$\text{Firstly, } 9 \div 4 = 2 \quad \begin{array}{r} 2 \\ 4 \overline{) 96} \\ \underline{8} \phantom{0} \\ 16 \end{array}$$

with a remainder of 1

$$\text{then, } 16 \div 4 = 4 \quad \begin{array}{r} 24 \\ 4 \overline{) 96} \\ \underline{8} \phantom{0} \\ 16 \end{array}$$



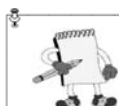
$$(16) \quad \begin{array}{r} 2 \\ 2 \overline{) 78} \\ \underline{4} \phantom{0} \\ 38 \end{array} \quad (21) \quad \begin{array}{r} 2 \\ 2 \overline{) 358} \\ \underline{4} \phantom{0} \\ 158 \end{array}$$

$$(17) \quad \begin{array}{r} 3 \\ 3 \overline{) 84} \\ \underline{6} \phantom{0} \\ 24 \end{array} \quad (22) \quad \begin{array}{r} 3 \\ 3 \overline{) 762} \\ \underline{6} \phantom{0} \\ 162 \end{array}$$

$$(18) \quad \begin{array}{r} 4 \\ 4 \overline{) 76} \\ \underline{4} \phantom{0} \\ 36 \end{array} \quad (23) \quad \begin{array}{r} 4 \\ 4 \overline{) 624} \\ \underline{4} \phantom{0} \\ 224 \end{array}$$

$$(19) \quad \begin{array}{r} 5 \\ 5 \overline{) 95} \\ \underline{5} \phantom{0} \\ 45 \end{array} \quad (24) \quad \begin{array}{r} 5 \\ 5 \overline{) 685} \\ \underline{5} \phantom{0} \\ 185 \end{array}$$

$$(20) \quad \begin{array}{r} 6 \\ 6 \overline{) 96} \\ \underline{6} \phantom{0} \\ 36 \end{array} \quad (25) \quad \begin{array}{r} 6 \\ 6 \overline{) 444} \\ \underline{6} \phantom{0} \\ 144 \end{array}$$



The aim of this activity sheet is to look at different strategies that could be used to work out division problems.

### Suggested extension activity:

Make up similar questions that cover the basic numeracy facts at the back of this resource. These are **key number knowledge facts**.

The strategies used on this worksheet are only a suggestion. Your child may not need to use some or all of these strategies and may have strategies of their own. Encourage them to talk about how they work out their answers. Remember that working out the answer with confidence is more important than the strategy used.

Sign when completed: \_\_\_\_\_

An object cut into TWO equal sized pieces is said to be cut in **half**.

**One half** written as a fraction is  $\frac{1}{2}$ .

For any fraction, the **bottom number** tells you how many times the 'whole' object has been cut or divided up.

Example:  $\frac{1}{2}, \frac{1}{3}, \frac{1}{4}, \frac{1}{5}, \frac{1}{6}, \frac{1}{10}$  etc.



**Write** the missing fractions, words and numbers in this table. Choose from this box.

one tenth, one half, one quarter, one sixth,  $\frac{1}{3}$   $\frac{1}{4}$   $\frac{1}{5}$   $\frac{1}{6}$

Fraction	Written as ...	Means ...
(1)	$\frac{1}{2}$	(2) ____ out of ____
one third	(3)	(4) ____ out of ____
(5)	(6)	1 out of 4
one fifth	(7)	(8) ____ out of ____
(9)	(10)	1 out of 6
(11)	$\frac{1}{10}$	(12) ____ out of ____

What fraction of each group is shaded?

(13)



(14)



(15)




(16)




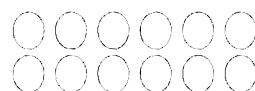
(17)




(18) Shade in  $\frac{1}{4}$  of these .



(19) Shade in  $\frac{1}{6}$  of these .



(20) Shade in  $\frac{1}{5}$  of these .



"What's one fifth of \$40?" asked Emma.

(Written as  $\frac{1}{5}$  of 40 = ● or  $\frac{1}{5} \times 40 = \bullet$ )



"Try what number multiplied by 5 is 40 or dividing 40 by 5," said Tom.

(Written as  $5 \times \bullet = 40$  or  $40 \div 5 = \bullet$ .)

Answer:  $\frac{1}{5} \times 40 = 8$ , as  $5 \times 8 = 40$  or  $40 \div 5 = 8$

Work out each fraction of these numbers.

(21) Find  $\frac{1}{3}$  of 21 = \_\_\_\_ (as  $3 \times \_\_\_ = 21$ )

(22) Find  $\frac{1}{5}$  of 35 = \_\_\_\_ (as  $5 \times \_\_\_ = 35$ )

(23) Find  $\frac{1}{6}$  of 36 = \_\_\_\_ (as  $6 \times \_\_\_ = 36$ )

(24) Find  $\frac{1}{4}$  of 20 = \_\_\_\_ (as  $4 \times \_\_\_ = 20$ )

(25) Find  $\frac{1}{5}$  of 50 = \_\_\_\_ (as  $5 \times \_\_\_ = 50$ )

(26) Find  $\frac{1}{6}$  of 42 = \_\_\_\_ (as  $42 \div 6 = \_\_\_$ )

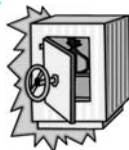
(27) Find  $\frac{1}{5}$  of 45 = \_\_\_\_ (as  $45 \div 5 = \_\_\_$ )

(28) Find  $\frac{1}{10}$  of 120 = \_\_\_\_ (as  $120 \div 10 = \_\_\_$ )

(29) Find  $\frac{1}{3}$  of 27 = \_\_\_\_ (as  $27 \div 3 = \_\_\_$ )

(30) Find  $\frac{1}{4}$  of 48 = \_\_\_\_ (as  $48 \div 4 = \_\_\_$ )

(31) Sarah had \$60.00 and spent a  $\frac{1}{4}$ .  
How much did she spend?



(32) Willie had \$45.00 and spent a  $\frac{1}{5}$ .  
How much did he spend?

(33) Brad had \$300.00 and spent a  $\frac{1}{6}$ .  
How much did he spend?



The aim of this activity sheet is to understand how to work out a fraction of a group of shapes or a number. Working with fractions can either involve dividing or multiplying.

#### Suggested extension activity:

Find a collection of objects from around the house or use money totals and ask your child to find a fraction of each group / money total, using the fractions on this worksheet. Extend the exercise to include working out what a total group would be, given a fraction of it.

Example: If  $\frac{1}{3}$  of a group is 4, how big is the group? Answer: 12

Sign when completed: \_\_\_\_\_

For any fraction, the **bottom number** tells you how many times the 'whole' object has been cut or divided up.



Example:  $\frac{1}{2}$ ,  $\frac{1}{3}$ ,  $\frac{1}{4}$ ,  $\frac{1}{5}$ ,  $\frac{1}{6}$ ,  $\frac{1}{10}$  etc.

If 1 is the top number, the bigger the number on the bottom, the **smaller** the fraction.

- (1) Write the fractions in the box in order from smallest to largest.

$\frac{1}{9}$ ,  $\frac{1}{3}$   
 $\frac{1}{6}$ ,  $\frac{1}{8}$   
 $\frac{1}{10}$ ,  $\frac{1}{4}$   
 $\frac{1}{7}$ ,  $\frac{1}{5}$

- (2) Mark each fraction (A to E) on this number line, where X =  $\frac{1}{2}$ .

A =  $\frac{1}{4}$ , B =  $\frac{1}{10}$ , C =  $\frac{1}{7}$ , D =  $\frac{1}{5}$ , E =  $\frac{1}{8}$ ,



- (3) Each strip below has been divided up. Beside each strip, write what fraction has been shaded in.



- (4) Show you understand fractions by shading ...

$\frac{3}{4}$  ➔

$\frac{2}{5}$  ➔

$\frac{5}{6}$  ➔

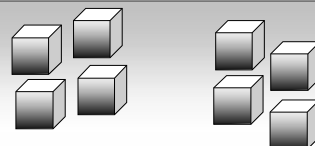
$\frac{4}{7}$  ➔

$\frac{3}{8}$  ➔

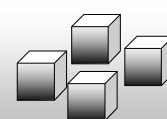
$\frac{7}{10}$  ➔

... of each strip.

Paul wants to use  $\frac{2}{3}$  of these blocks to build a model.

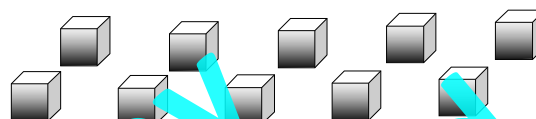


How many blocks will he use in this model?

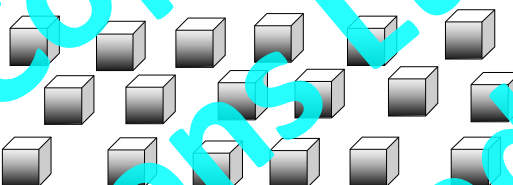


Answer: 8 blocks

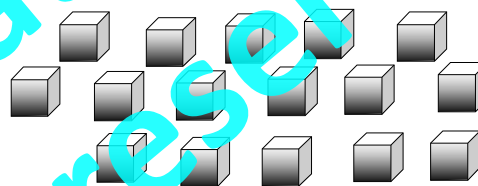
Look at each pile of blocks.



- (5) What is  $\frac{4}{5}$  of this pile? \_\_\_\_\_ blocks

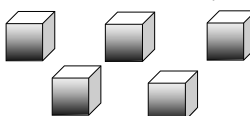


- (6) What is  $\frac{2}{3}$  of this pile? \_\_\_\_\_ blocks



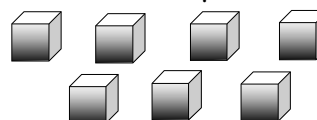
- (7) What is  $\frac{3}{4}$  of this pile? \_\_\_\_\_ blocks

- (8) If 5 blocks make up  $\frac{1}{4}$  of a pile, how many blocks are in the pile?

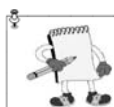


\_\_\_\_\_ blocks

- (9) If 7 blocks make up  $\frac{1}{5}$  of a pile, how many blocks are in the pile?



\_\_\_\_\_ blocks



The aim of this activity sheet is to order fractions, understand fractions when the top number is greater than one and find a 'whole' given what a fraction of a whole.

#### Suggested extension activity:

Have a supply of blocks and ask your child to find a fraction of each pile or find the whole, given the fraction.

Example: 'I have 12 blocks, how many blocks is two thirds of this pile?' and 'If one quarter of a pile of blocks is five, how many blocks make up a whole pile?'

Sign when completed: \_\_\_\_\_

To **solve** an equation means to **work out** the number that would go where the letter is.

Examples:

$15 + d = 24, \quad f + 8 = 23,$

$22 - r = 6, \quad g - 8 = 9$

Remember that the total on either side of the equals sign, must be the same.



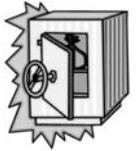
Use **any strategy** you like to solve these equations. Be prepared to talk about what strategy you used.



- |      |                      |       |       |
|------|----------------------|-------|-------|
| (1)  | $35 + a = 53$        | $a =$ | _____ |
| (2)  | $28 + b = 42$        | $b =$ | _____ |
| (3)  | $47 - c = 39$        | $c =$ | _____ |
| (4)  | $66 - d = 47$        | $d =$ | _____ |
| (5)  | $e + 62 = 98$        | $e =$ | _____ |
| (6)  | $f - 37 = 42$        | $f =$ | _____ |
| (7)  | $g + 18 = 94$        | $g =$ | _____ |
| (8)  | $84 - h = 49$        | $h =$ | _____ |
| (9)  | $i + 73 = 100$       | $i =$ | _____ |
| (10) | $j - 63 = 21$        | $j =$ | _____ |
| (11) | $20 \times k = 60$   | $k =$ | _____ |
| (12) | $m \times 6 = 36$    | $m =$ | _____ |
| (13) | $180 \div n = 60$    | $n =$ | _____ |
| (14) | $400 \times p = 800$ | $p =$ | _____ |
| (15) | $q \div 10 = 80$     | $q =$ | _____ |
| (16) | $48 \div r = 8$      | $r =$ | _____ |
| (17) | $s \times 30 = 120$  | $s =$ | _____ |
| (18) | $t \div 5 = 80$      | $t =$ | _____ |
| (19) | $48 \div u = 12$     | $u =$ | _____ |
| (20) | $v \times 50 = 200$  | $v =$ | _____ |

Read each word problem, write an equation, then **work out** the **answer**. There may be more than one way to write the equation.

- (21) If Jack has \$70.00 and spends \$38.00, how much does he have left?



- (22) Emma spends \$8.00 and has \$45.00 left. How much money did Emma start with?



- (23) Kate buys 10 books for \$130.00. How much did each book cost?



- (24) Sam spends \$36.00 buying 4 C.D.'s. How much did each C.D. cost?



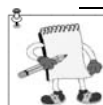
- (25) Bill buys 5 movie tickets for \$45.00. How much does each movie ticket cost?



- (26) In a new classroom there are only 17 chairs. If a class of 31 pupils uses this room, how many more chairs will be needed?



- (27) Mark is reading a book that has 80 pages. If he has 53 pages to go, how many has he read?



The aim of this activity sheet is to introduce the algebra skill of solving equations using any strategy stages involving  $+$   $-$  and  $\times$   $\div$  numeracy facts.

#### Suggested extension activity:

Make up word problems involving everyday events that can be written as equations. Have your child write an equation for each problem.

Example: If I buy 3 C.D.'s for \$36.00, how much does each C.D. cost? If I have \$30.00 and spend \$21.00 on food, how much money do I have left? (Equations would be  $3 \times ? = 36$  or  $36 \div 3 = ?$  &  $30 - ? = 21$  or  $21 + ? = 30$ )

Sign when completed: \_\_\_\_\_



In New Zealand we use a measuring system known as the **metric system**.

In the metric system, the **metre** is the basic unit for **measuring length**.

A metre is about the length of a long stride or about 3 times the length of this page (A4 size).



**Circle** yes or no for objects or distances that would be best measured using the 'metre'.

- (1) The length of a netball court.      yes / no
- (2) The length of a felt pen.      yes / no
- (3) The distance between New Zealand and Fiji.      yes / no
- (4) The height of a pine tree.      yes / no
- (5) The thickness of a reading book.      yes / no
- (6) The height of a lamp-post.      yes / no
- (7) The distance of a cross-country race.      yes / no
- (8) The distance around the school grounds.      yes / no

#### Other metric units for measuring length.

<b>kilometre</b>	1000 times longer than a metre
<b>metre</b>	standard unit for length
<b>centimetre</b>	100 times shorter than a metre
<b>millimetre</b>	1000 times shorter than a metre

**Write** which **unit of measurement** would be best to measure ....



- (9) the distance between two cities. \_\_\_\_\_
- (10) the length of your big toe. \_\_\_\_\_
- (11) the thickness of a match stick. \_\_\_\_\_
- (12) the length of a swimming race. \_\_\_\_\_

#### Converting between measurement units.

1000 millimetres (mm) = 1 metre (m)
100 centimetres (cm) = 1 metre (m)
10 millimetres (mm) = 1 centimetre (cm)
1000 metres (m) = 1 kilometre (km)



#### Converting between metres and millimetres.

- (13) 1m = \_\_\_\_\_ mm      (16) \_\_\_\_\_ m = 5000mm
- (14) 7m = \_\_\_\_\_ mm      (17) \_\_\_\_\_ m = 8000mm
- (15) 9.3m = \_\_\_\_\_ mm      (18) \_\_\_\_\_ m = 2800mm

#### Converting between metres and centimetres.

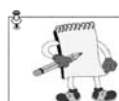
- (19) 1m = \_\_\_\_\_ cm      (22) \_\_\_\_\_ m = 800cm
- (20) 6m = \_\_\_\_\_ cm      (23) \_\_\_\_\_ m = 900cm
- (21) 5.7m = \_\_\_\_\_ cm      (24) \_\_\_\_\_ m = 720cm

#### Converting between millimetres & centimetres.

- (25) 10mm = \_\_\_\_\_ cm      (28) \_\_\_\_\_ mm = 7cm
- (26) 60mm = \_\_\_\_\_ cm      (29) \_\_\_\_\_ mm = 5cm
- (27) 45mm = \_\_\_\_\_ cm      (30) \_\_\_\_\_ mm = 6.9cm

#### Converting between metres and kilometres.

- (31) 1000m = \_\_\_\_\_ km      (34) \_\_\_\_\_ m = 8km
- (32) 7000m = \_\_\_\_\_ km      (35) \_\_\_\_\_ m = 6km
- (33) 9100m = \_\_\_\_\_ km      (36) \_\_\_\_\_ m = 2.7km



The aim of this activity sheet is to introduce the 'metre', the standard unit for measuring length. Units for measuring smaller or longer distances are also introduced.

#### Suggested extension activity:

Using a 1 metre ruler or a long tape measure, demonstrate how long a metre is. Talk about 'distances between two points', ask your child which unit of measurement would be the best unit to use. Remember there may be more than one appropriate unit.

Example: carpenters use millimetres, dress makers use centimetres.

Ask your child to convert between units as above in Q13 to Q36.

Sign when completed: \_\_\_\_\_

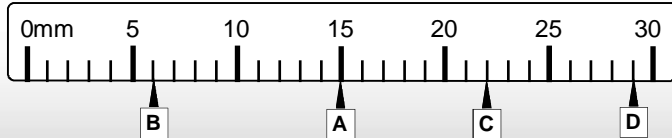


All measurement instruments have a **scale**. Being able to read the scale correctly is an important skill.



What measurement unit is on this ruler?

What measurements are given by the pointers A to D?



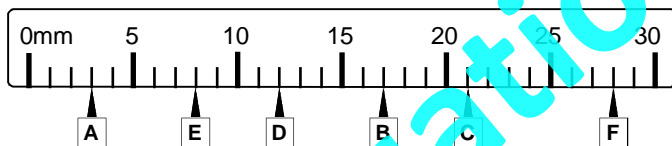
The measuring unit is millimetres (mm).

Answers: A = 15mm, B = 6mm, C = 22mm, D = 29mm

Look at each ruler below.

- (1) Name the units on the ruler below ...

millimetres or centimetres (circle one)



- (2) What are the measurements given by the pointers A to F?

A = \_\_\_\_\_

D = \_\_\_\_\_

B = \_\_\_\_\_

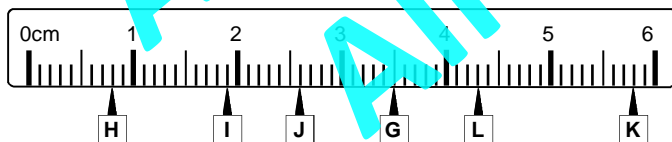
E = \_\_\_\_\_

C = \_\_\_\_\_

F = \_\_\_\_\_

- (3) Name the units on the ruler below ...

millimetres or centimetres (circle one)



- (4) What are the measurements given by the pointers G to L?  
Example: 2.4cm, 3.9cm etc.

G = \_\_\_\_\_

J = \_\_\_\_\_

H = \_\_\_\_\_

K = \_\_\_\_\_

I = \_\_\_\_\_

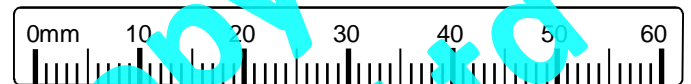
L = \_\_\_\_\_

- (5) Mark and label the points of A to F on this ruler.



A = 25mm, B = 17mm, C = 41mm

D = 0.9cm, E = 3.4cm, F = 5.8cm

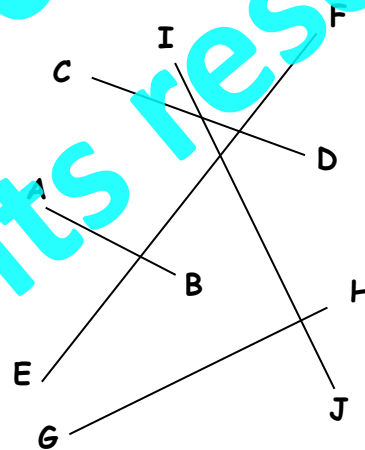


- (6) How long is this pencil? Answer in mm & cm.

\_\_\_\_\_ mm is the same as \_\_\_\_\_ cm

For the next two questions you will need a ruler.

- (7) Measure these lines to the nearest millimetre.



Line AB = \_\_\_\_\_ mm

Line CD = \_\_\_\_\_ mm

Line EF = \_\_\_\_\_ mm

Line GH = \_\_\_\_\_ mm

Line IJ = \_\_\_\_\_ mm

- (8) Draw a 55mm line in the space below.



The aim of this activity sheet is to learn to read scales on a ruler and measure the length of small objects. Remember to measure from zero on the ruler, not the end.

#### Suggested extension activity:

Find a collection of objects from around the house that can be measured using a ruler or tape measure. Ask your child to measure distances to the nearest centimetre or  $\frac{1}{2}$  metre, as appropriate.

Example: The width of a door is about 80cm.

Ask your child to draw lines of known lengths, such as 9cm.

Sign when completed: \_\_\_\_\_

In New Zealand we use a measuring system known as the **metric system**.

In the metric system, the **gram** is the basic unit for **measuring weight**.



A gram is a small weight. A packet of rice crackers weighs about 100 grams.

**Circle** yes or no for these objects that would be able to be weighed using a 'gram' as the unit of weight.



- |  |          |
|--|----------|
| (1) The weight of a truck.             | yes / no |
| (2) The weight of a toothpick.         | yes / no |
| (3) The weight of a piece of paper.    | yes / no |
| (4) The weight of a mountain bike.     | yes / no |
| (5) The weight of an orange.           | yes / no |
| (6) The weight of a feather.           | yes / no |
| (7) The weight of a small plastic toy. | yes / no |
| (8) The weight of an exercise book.    | yes / no |

#### Metric units for measuring weight.

tonne	1000 times heavier than a kilogram
kilogram	1000 times heavier than a gram
gram	standard unit for weight
milligram	1000 times lighter than a gram

**Write which unit of measurement** would be best to measure ....

- (9) the weight of a small car. \_\_\_\_\_
- (10) the weight of a snowflake. \_\_\_\_\_
- (11) the weight of a piece of bread. \_\_\_\_\_
- (12) the weight of a large horse. \_\_\_\_\_



#### Converting between measurement units.

$$1000 \text{ milligrams (mg)} = 1 \text{ gram (g)}$$

$$1000 \text{ grams (g)} = 1 \text{ kilogram (kg)}$$

$$1000 \text{ kilograms (kg)} = 1 \text{ tonne (t)}$$



#### Converting between grams and milligrams.

$$(13) 1g = \text{_____} mg \quad (17) \text{_____} g = 2000mg$$

$$(14) 5g = \text{_____} mg \quad (18) \text{_____} g = 9000mg$$

$$(15) 7g = \text{_____} mg \quad (19) \text{_____} g = 4000mg$$

$$(16) 8.3g = \text{_____} mg \quad (20) \text{_____} g = 2300mg$$

#### Converting between grams and kilograms.

$$(21) 1000g = \text{_____} kg \quad (25) \text{_____} g = 5kg$$

$$(22) 6000g = \text{_____} kg \quad (26) \text{_____} g = 3kg$$

$$(23) 8000g = \text{_____} kg \quad (27) \text{_____} g = 9kg$$

$$(24) 3400g = \text{_____} kg \quad (28) \text{_____} g = 4.7kg$$

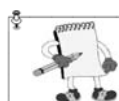
#### Converting between kilograms and tonnes.

$$(29) 1000kg = \text{_____} t \quad (33) \text{_____} kg = 3t$$

$$(30) 9000kg = \text{_____} t \quad (34) \text{_____} kg = 8t$$

$$(31) 3000kg = \text{_____} t \quad (35) \text{_____} kg = 5t$$

$$(32) 7600kg = \text{_____} t \quad (36) \text{_____} kg = 2.1t$$



The aim of this activity sheet is to introduce the 'gram', the standard unit for measuring weight. Units for measuring lighter or heavier weights are also introduced.

#### Suggested extension activity:

Using some kitchen scales to demonstrate how light a gram is or some other object of known weight. Using different sized objects, ask your child which unit of weight would be the best unit to use. Remember there may be more than one appropriate unit.

Example: 500gms of butter is the same as half a kilogram.

Ask your child to convert between units as above in Q13 to Q36.

Sign when completed: \_\_\_\_\_

In New Zealand we use a measuring system known as the **metric system**.

In the metric system, the **litre** is the basic unit for **measuring volume**.

A litre is about 4 cups of water or the size of some milk or juice cartons.



sys-

**Converting** between measurement units.

1000 millilitres (mL) = 1 litre (L)

1000 litres (L) = 1 kilolitre (kL)



**Converting** between litres and millilitres.

(13) 1L = \_\_\_\_\_ mL (17) \_\_\_\_\_ L = 5000mL

(14) 4L = \_\_\_\_\_ mL (18) \_\_\_\_\_ L = 4000mL

(15) 7L = \_\_\_\_\_ mL (19) \_\_\_\_\_ L = 9000mL

(16) 9.3L = \_\_\_\_\_ mL (20) \_\_\_\_\_ L = 6300mL

**Converting** between litres and kilolitres.

(21) 1000L = \_\_\_\_\_ kL (25) \_\_\_\_\_ L = 4kL

(22) 3000L = \_\_\_\_\_ kL (26) \_\_\_\_\_ L = 7kL

(23) 6000L = \_\_\_\_\_ kL (27) \_\_\_\_\_ L = 9kL

(24) 3400L = \_\_\_\_\_ kL (28) \_\_\_\_\_ L = 2.6kL

**Word problems.**

(29) How many litres of juice is 2500mL?



(30) How many millilitres of medicine in a 1.2L bottle?

(31) How many kilolitres of milk is 150000L?



**Metric units for measuring volume.**

<b>kilolitre</b>	1000 times more volume than a litre
<b>litre</b>	standard unit for volume
<b>millilitre</b>	1000 times less volume than a litre

**Write which unit of measurement** would be best to measure ...



(9) the volume of water in a small fish bowl.

(10) the volume of water in a rain drop.

(11) the volume of water in a half-filled cup.

(12) the volume of water in the sea.



The aim of this activity sheet is to introduce the 'litre', the standard unit for measuring volume. Units for measuring more or less volume are also introduced.

**Suggested extension activity:**

Using some containers or measuring jugs, demonstrate how much liquid is needed to fill a 1 litre container. Using different sized containers, ask your child which unit for volume would be the best unit to use. Remember there may be more than one appropriate unit.

Example: Swimming pool volumes are given as 1000's of litres or kL's.

Ask your child to convert between units as above.

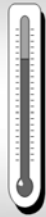
Sign when completed:

"Yesterday was the hottest day this year," said Joe. "The temperature was  $41^{\circ}\text{C}$ ."

The unit for measuring temperature is called **degrees**.

**Degrees Centigrade** or **degrees Celsius**. Example:  $10^{\circ}\text{C}$ ,  $-3^{\circ}\text{C}$

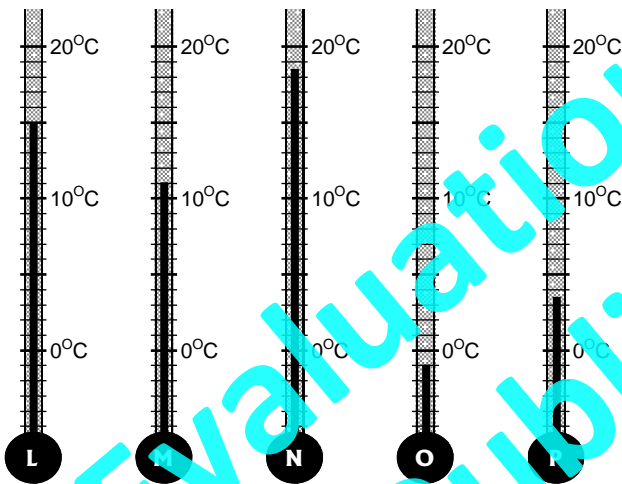
Water freezes at  $0^{\circ}\text{C}$  and boils at  $100^{\circ}\text{C}$ .



- (1) What is the name of the instrument used to measure temperature?



- (2) What is the **temperature** shown on each diagram **L** to **P** drawn below?



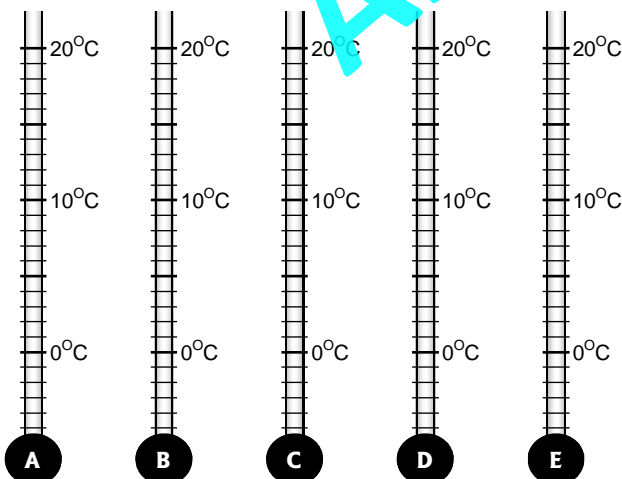
L =  $\text{ }^{\circ}\text{C}$  M =  $\text{ }^{\circ}\text{C}$  N =  $\text{ }^{\circ}\text{C}$

O =  $\text{ }^{\circ}\text{C}$  P =  $\text{ }^{\circ}\text{C}$

- (3) Draw each temperature on the thermometers **A** to **E** below.

A =  $15^{\circ}\text{C}$  B =  $8^{\circ}\text{C}$  C =  $0^{\circ}\text{C}$

D =  $-3^{\circ}\text{C}$  E =  $11.5^{\circ}\text{C}$



Use one of the temperature scales shown opposite to help you answer the questions below.

- (4) If the temperature was  $12^{\circ}\text{C}$  then rises  $6^{\circ}\text{C}$ , what is the new temperature?
- (5) If the temperature was  $9^{\circ}\text{C}$  then rises  $8^{\circ}\text{C}$ , what is the new temperature?

- (6) If the temperature was  $13^{\circ}\text{C}$  then drops  $7^{\circ}\text{C}$ , what is the new temperature?

- (7) If the temperature was  $21^{\circ}\text{C}$  then drops  $8^{\circ}\text{C}$ , what is the new temperature?

- (8) In Joshua's living room the temperature is  $17^{\circ}\text{C}$ . When he turns on the heat pump, the temperature rises by  $6^{\circ}\text{C}$ .

What is the temperature in Joshua's living room now?



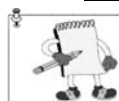
- (9) In Olivia's bedroom the temperature is  $28^{\circ}\text{C}$ . When she opened the window, the temperature went down by  $5^{\circ}\text{C}$ .

What is the temperature in Olivia's room now?



- (10) The temperature of Dylan's milo drink is  $82^{\circ}\text{C}$ . When the temperature drops by  $39^{\circ}\text{C}$  it is cool enough to drink.

What is the temperature of Dylan's milo drink now?



The aim of this activity sheet is to introduce the units for measuring temperature and how to read a thermometer. A negative temperature means it was below zero.

#### Suggested extension activity:

If you have a weather thermometer at home place it in different situations and record the change in temperature over time. Watch the weather report on TV and record the temperatures of the cities throughout NZ over a 3 to 5 day period. Work out the change in temperature between days for each city.

Example: Nelson: Monday  $24^{\circ}\text{C}$ , Tuesday  $28^{\circ}\text{C}$  .... rise of  $4^{\circ}\text{C}$

Sign when completed: \_\_\_\_\_



The time on this **analogue clock** is 10 past 9.

Not all clocks have hands.

Some clocks use only numbers and are called **digital clocks**.

This is 10 past 9 on a digital clock ...

9:10



**Draw** the hands on the analogue clock **or** show the time on a digital clock **or** write the time in words.



(1)



Time

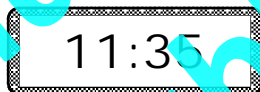
*twenty past seven*

(2)



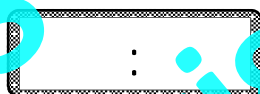
Time

(3)



Time

(4)



Time

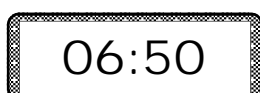
(5)



Time

*quarter to four*

(6)



Time

What is the new time?



(7)



+ 55 minutes

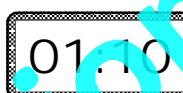
(8)

- 2  $\frac{1}{4}$  hours

(9)

+ 4  $\frac{1}{2}$  hours

(10)



- 65 minutes

(11)

A roast chicken takes 3  $\frac{1}{2}$  hours to cook.

If it went into the oven at 4:20,

when will it be ready? (answer in words)

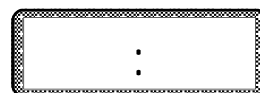


(12)

If a 50 minute TV programme

finished at 20 to 6, at what time did it start.

(answer as digital time)



(13)

The school play lasted for

1  $\frac{3}{4}$  hours and finished at

half past seven.

At what time did it start?

(answer on this clock face)



The aim of this activity sheet is to be able to tell the time and convert between analogue and digital time displays, plus add or subtract time to a given time.

#### Suggested extension activity:

Draw an analogue or digital clock face and repeat similar exercises as outlined on this page.

*Example: On the microwave it says 12:30. How would that time appear on an analogue clock face?*

Given a starting time, ask your child what the time will be in 3 hours, 5 hours, 10 hours etc. or what the time was 4 hours ago etc.

Sign when completed:

**Convert** between these time units.



- (1) How many days in 3 weeks? \_\_\_\_\_
- (2) How many seconds in 5 minutes? \_\_\_\_\_
- (3) How many months in 2 years? \_\_\_\_\_
- (4) How many minutes in 4 hours? \_\_\_\_\_
- (5) How many weeks in 2 years? \_\_\_\_\_
- (6) How many hours in 3 days? \_\_\_\_\_
- (7) How many days in a year? \_\_\_\_\_
- (8) How many days in a leap year? \_\_\_\_\_
- (9) How many minutes in 3 hours? \_\_\_\_\_
- (10) How many days in 5 weeks? \_\_\_\_\_
- (11) How many hours in 4 days? \_\_\_\_\_
- (12) How many months in 5 years? \_\_\_\_\_
- (13) How many weeks in 21 days? \_\_\_\_\_
- (14) How many days in 48 hours? \_\_\_\_\_
- (15) How many years in 36 months? \_\_\_\_\_

When writing time, the letters **a.m.** and **p.m.** are written after the time, depending on the time of the day.

*Example:* 10:00 a.m. is in the morning, while 2:00 p.m. is in the afternoon.



**Write** these times as **a.m.** or **p.m.** time.

- (16) Alex went to the shop after school at 5:30. \_\_\_\_\_
- (17) Kayla had an early breakfast at 7:00. \_\_\_\_\_
- (18) School finished early today at 2:30. \_\_\_\_\_
- (19) Logan normally gets up at about 7:45. \_\_\_\_\_
- (20) We are going to Ashley's place for lunch at 12:10. \_\_\_\_\_
- (21) On Monday the sun went down at 6:35. \_\_\_\_\_

"What time does the bus get us to town?" asked Michael.



"Look at the bus timetable," said mum.



This table shows the bus stop times for the route from Styx Mill to Westmorland.

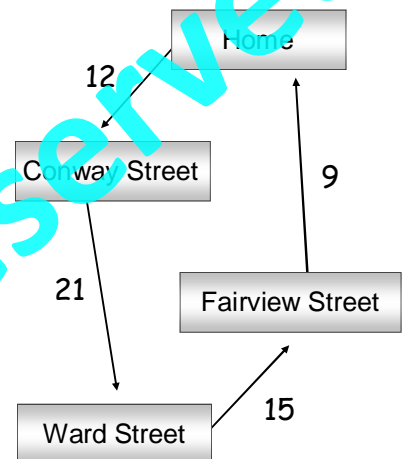
Place	Time
Styx Mill	10:29 a.m.
Northlands Mall	10:47 a.m.
Bealey Avenue	10:52 a.m.
City Centre	11:07 a.m.
Sydenham shops	11:19 a.m.
Barrington Mall	11:27 a.m.
Westmorland	11:36 a.m.

- (22) How long does it take to get from Styx Mill to City Centre? \_\_\_\_\_

- (23) How long does it take to get from Bealey Ave to Barrington Mall? \_\_\_\_\_

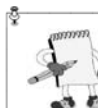


Logan is going for a bike ride around the streets. He knows how long it takes and the time in minutes is shown on this diagram.



- (24) Use this table to work out the time Logan will reach each street and get home.

Place	Time
Start: Home	11:42 a.m.
Conway Street	
Ward Street	
Fairview Street	
Finish: Home	



The aim of this activity sheet is to introduce time units, convert between time units, describe time as a.m. or p.m. and prepare a timetable of events.

**Suggested extension activity:**

Ask your child to convert between various time units and a.m. / p.m. time.

*Example:* How many minutes in 7 hours? etc.

Make up a timetable for a bus or train route. Ask your child to work out how long it takes to get between stops.

*Example:* How long is the travel time if I get on the bus at 7:56 a.m. and get off at 9:07 a.m.?

Sign when completed: \_\_\_\_\_



"Is this a 50 cent coin?" asked Jane.



(1) What is the **value** of each coin?



10 cents,  
20 cents,  
50 cents,  
\$1.00,  
\$2.00

These are **three** of the most common notes used in New Zealand.

A picture of a famous New Zealander is on the **front** (A to C) of each note.



A picture of a bird is on the **back** (D to F) of each note.



(2) **Match** the backs of these notes with the fronts, their colour (orange, blue, green) and the value of each note.

Front of note	Back of note	Value of note	Colour
<b>A</b>		\$	
<b>B</b>		\$	
<b>C</b>		\$	

What coins and notes could be used to make up these money amounts?

There will be more than one correct answer.



(3) \$1.40 =

(4) \$2.70 =

(5) \$8.90 =

(6) \$12.50 =

(7) \$27.30 =

(8) \$42.80 =

(9) \$50.10 =

(10) \$70.60 =



The aim of this activity sheet is to become familiar with common NZ coins and notes and make up money totals using combinations of coins and notes.

#### Suggested extension activity:

Have a selection of NZ coins and notes or make up cards to represent money. Using the methods above, make up questions involving adding groups of coins / notes, making up a given total and selecting different combinations of coins / notes to make a given value.

Sign when completed:

Terry has a \$10.00 note. She buys a book that costs \$7.50.



What change does she get back?

What coins could make up this change, using the least number of coins?

Answer:

\$2.50 change, made up of a \$2.00 and a 50c coin.



\$0.60



\$12.40



\$3.60



\$5.90



\$21.70



\$2.80

You are going shopping.

Use the items above to **work out** the **cost** of what you buy and the **change** you will get back.

**List** the coins / notes used for the change, that uses the **least** number of coins / notes.

- (1) You have \$10.00 and buy 1 hamburger.

$$\$5.90 + \underline{\hspace{2cm}} = \$10.00$$

change:                                 

- (2) You have \$10.00 and buy 1 pen.

$$\$3.60 + \underline{\hspace{2cm}} = \$10.00$$

change:                                 

- (3) You have \$10.00 and buy 1 apple.

$$\underline{\hspace{2cm}} + \underline{\hspace{2cm}} = \$10.00$$

change:                                 

- (4) You have \$25.00 and buy 1 model aeroplane.

$$\$25.00 - \underline{\hspace{2cm}} = \$21.70$$

change:                                 

- (5) You have \$20.00 and buy 3 apples.

$$\$20.00 - \underline{\hspace{2cm}} = \$1.80$$

change:                                 

- (6) You have \$20.00 and buy 1 C.D.

$$\$20.00 - \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

change:                                 

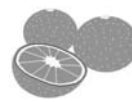
Prices for food items are often given as **prices per kilogram** (per kg).

*Example: If 1kg of apples cost \$2.50, how much would 2kgs cost?*

*Answer:  $\$2.50 \times 2 = \$5.00$*



apples  
\$2.50 per kg



oranges  
\$4.60 per kg



grapes  
\$7.30 per kg



bananas  
\$1.90 per kg

**Work out the cost** of buying these items.

You are going to pay for them using cash.

Using the **least** number of coins / notes, list the coins / notes used to pay for these items.

- (7) You buy 3kgs of apples.

$$\$ \underline{\hspace{2cm}} \times 3 = \$ \underline{\hspace{2cm}}$$

Cash paid:                                 

- (8) You buy 2kgs of grapes.

$$\$ \underline{\hspace{2cm}} \times 2 = \$ \underline{\hspace{2cm}}$$

Cash paid:                                 

- (9) You buy 3kgs of bananas.

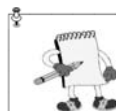
$$\$ \underline{\hspace{2cm}} \times 3 = \$ \underline{\hspace{2cm}}$$

Cash paid:                                 

- (10) You buy 4kgs of oranges.

$$\$ \underline{\hspace{2cm}} \times 4 = \$ \underline{\hspace{2cm}}$$

Cash paid:                                 



The aim of this activity sheet is to learn how to handle money by working out the cost of buying various items and the change you would get back.

#### Suggested extension activity:

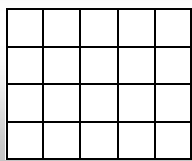
Make up your own shopping list / prices. Ask your child to work out the cost of buying a group of items and the change they would receive if they paid for it with a certain amount.

*Example: 3 items @ \$2.50 each, paid for with a \$10.00 note. How much did it cost and what change do you have?*

Sign when  
completed:

"If you can paint it, it has AREA," said Sarah.

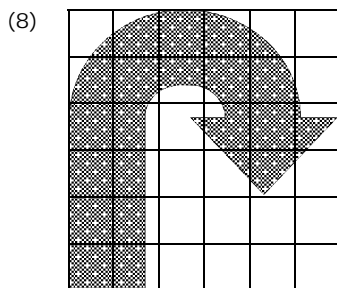
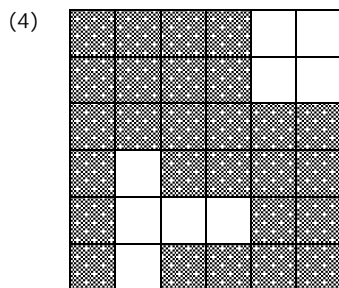
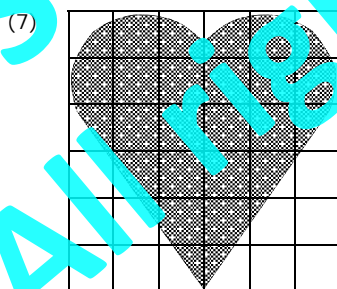
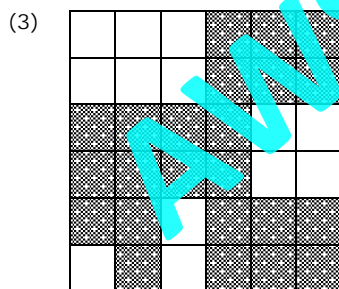
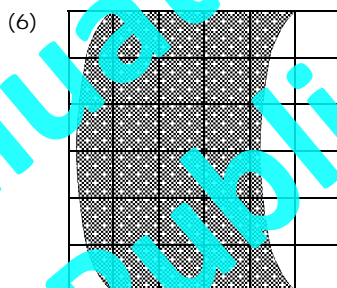
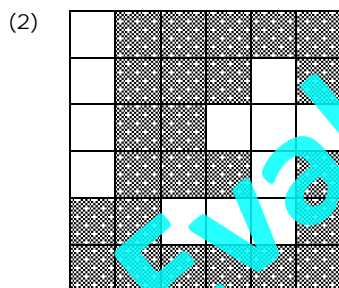
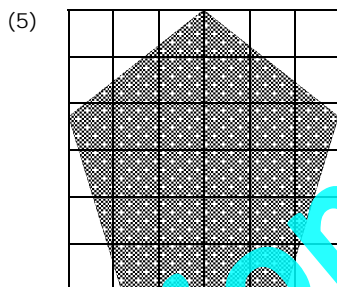
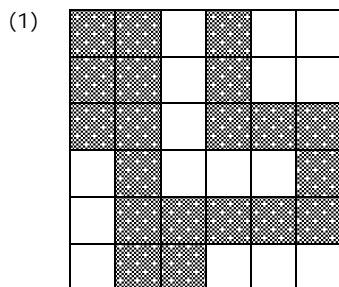
This shape has been divided up into squares.



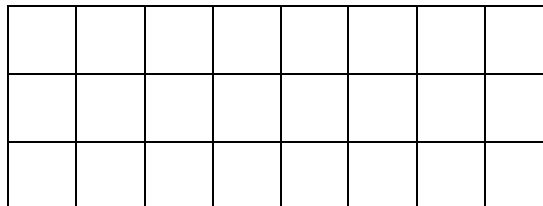
Count the number of squares to work out the area of this shape.

Answer: 20 squares

Work out the area of these shaded shapes by counting the 'whole' squares and estimating the area of the 'partly' shaded squares.



- (9) Draw a shape in the grid below that has an area of 18 squares.



This shape is made up of 1 row of 6 squares.



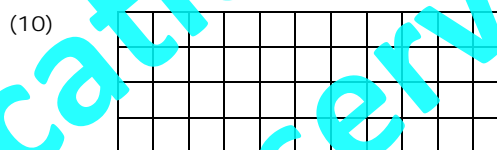
What is the area?

If the shape was made up of 2 rows of 6 squares, what would the area be?

Answers: 6 square units, 12 square units

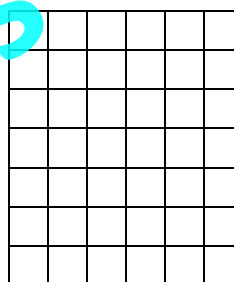


Work out the area of these rectangles by first counting the number of squares in ONE row.



1 row = \_\_\_\_\_ squares

Area = \_\_\_\_\_ rows of \_\_\_\_\_ = \_\_\_\_\_ sq units



1 row = \_\_\_\_\_ squares

Area = \_\_\_\_\_ rows of \_\_\_\_\_ = \_\_\_\_\_ sq units



The aim of this activity sheet is to introduce the concept of area. Any surface that can be painted has area. Area is measured in square units, such as square metres.

#### Suggested extension activity:

Draw shapes on maths paper and ask your child to work out each area by counting or estimating the number of squares.

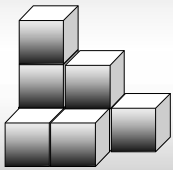
Ask your child to work out the area of a shape given how many squares in ONE row and how many rows. Such a shape is called a rectangle or square.

Example: If 1 row is 5 squares long, what is the area of a rectangle made up of 3 rows.  $5 + 5 + 5 = 15$  square units.

Sign when completed: \_\_\_\_\_

"If you can fill it, it has VOLUME," said Ryan.

"How many cubes in this pile?" asked Ryan.



Remember to count the ones you cannot see.

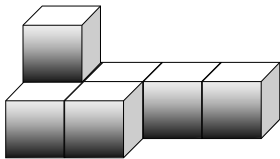
Answer: 8 cubes (2 you cannot see)



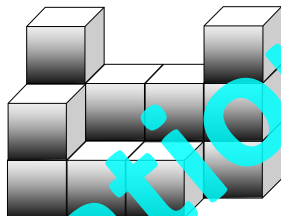
This shape is said to have a volume of 8 cubes.

Work out the **volume** of each pile of cubes.  
Remember to include cubes you cannot see.

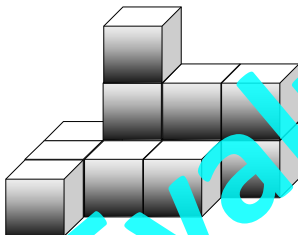
(1) \_\_\_\_\_ cubes



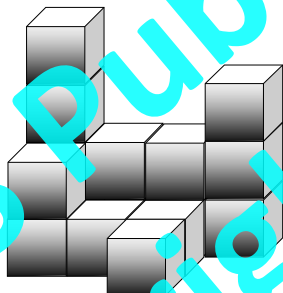
(2) \_\_\_\_\_ cubes



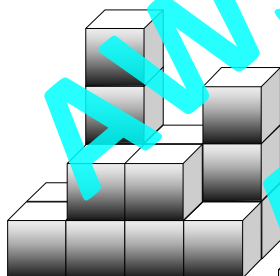
(3) \_\_\_\_\_ cubes



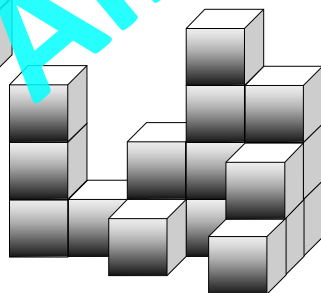
(4) \_\_\_\_\_ cubes



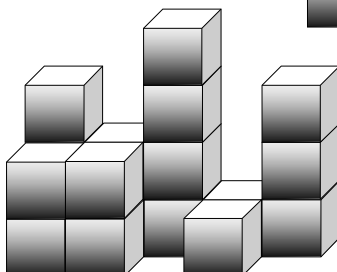
(5) \_\_\_\_\_ cubes



(6) \_\_\_\_\_ cubes

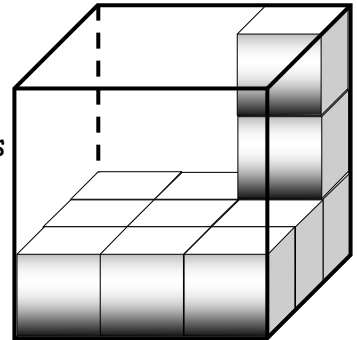


(7) \_\_\_\_\_ cubes



This big box is to be filled with smaller boxes (cubes).

The bottom layer has already been filled.



(8) How many small cubes are in the bottom layer? \_\_\_\_\_ cubes

(9) How many layers of cubes will this box hold? \_\_\_\_\_ layers

(10) Work out how many small cubes this big box will hold. \_\_\_\_\_ cubes

(11) In a second box, the bottom layer can hold 20 cubes.  
If there are 5 layers, how many cubes can this box hold?



Using 'lego', or similar blocks, build some shapes with the following volumes:

(12) 8 cubes

(13) 18 cubes

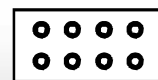
(14) 25 cubes

(15) 34 cubes

(16) 40 cubes



small blocks have a volume of 1 cube.



large blocks have a volume of 2 cubes.



The aim of this activity sheet is to introduce the concept of volume. If you can fill something, it has volume.

#### Suggested extension activity:

Have a selection of blocks and ask your child to build something with a known volume, as above. Note that different structures can have the same volume if they contain the same number of blocks.

Sign when completed: \_\_\_\_\_



- (1) Name these 2D shapes using the words in the box below.



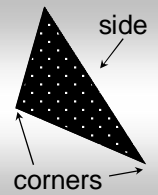
Shape	Name of shape

circle, oval, triangle, square, rectangle, diamond or rhombus, pentagon, hexagon, octagon

- (2) Draw a picture made up of ...  
 1 circle, 3 rectangles, 1 square,  
 2 triangles and 1 octagon.

"What shape has three corners and three straight sides?" asked Jasmine.

Answer: a triangle



Imagine you are talking to someone on the telephone.

Write down what you would say, as you describe each of these shapes. Use words such as side, corner, straight and curved.



(3)



(4)



(5)



What are some of the differences between shapes A & B and what do they have in common?



(6)



The aim of this activity sheet is to be able to recognise, name, draw and describe various 2D shapes.

#### Suggested extension activity:

Select one of the 2D shapes on this activity sheet. Describe the shape by its features and ask your child to draw and name the shape.

Example: I have four corners, all my four sides are the same length.  
 (Answer: It could be a square or a rhombus)

Sign when completed:

The 3D objects are based on many of the 2D shapes.

*Example:* A **cylinder** is based on a **circle**. If you stacked some 50c coins on top of each other, it would look like a cylinder.



- (1) **Name these 3D objects (A to E) using the words in the box below.**

A



B



C



D



E



3D Objects:

cylinder,

cone,

cube,

rectangular box,

sphere (ball)

- (2) **Look around your home and make a list of 6 objects that are shaped like cones, cylinders, cubes, rectangular boxes or spheres.**



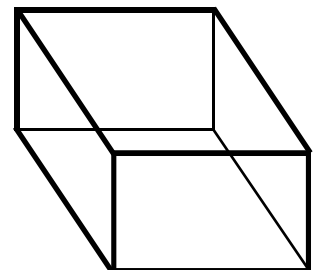
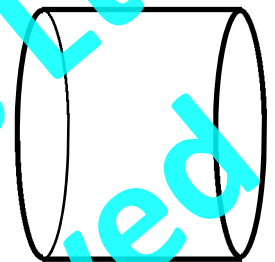
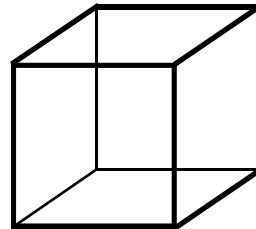
Object name

3D shape


(3)

**Drawing** 3D objects is not easy.

See if you can draw these 3D objects.



The aim of this activity sheet is to be able to recognise common everyday 3D objects and be able to draw such shapes.

#### Suggested extension activity:

Have a selection of 3D objects from around your home that illustrate the common 3D objects as on this worksheet. Ask your child to group the objects by shape. Have some objects that are made up of more than one 3D shape, such as a bottle (cylinder & cone).

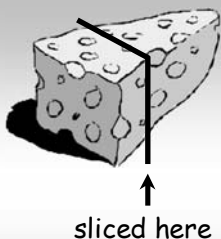
Sign when completed: \_\_\_\_\_



This block of cheese has been sliced as shown.

What shape would the sliced end look like?

Answer: a rectangle



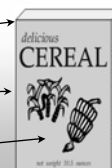
If you cut through an object, you see a **cross-section** of the object.

"This object has 8 corners, 12 edges and 6 faces. Opposite faces are shaped like rectangles and the same size.

corner

edge

face

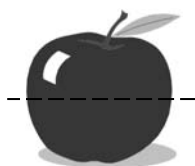


What shape am I?" asked Alister.

Answer: a rectangular box

Look at these objects and **describe** what 2D shape you would see if they were sliced along the dotted line.

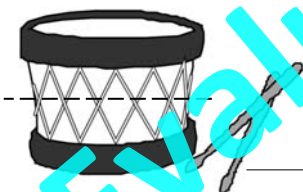
(1)



(2)



(3)



(4)



(5)



(6)



(7)



Imagine you are talking to someone on the telephone.

Write down what you would say as you **describe** each of these objects.

Use words such as top, bottom, end, side, opposite, corner, edge, face, straight, curved and 2D shape names.



(8)



(9)



(10)



The aim of this activity sheet is to describe various 3D objects by their features and then determine from what 2D shape the 3D object was derived from.

#### Suggested extension activity:

Play a game of 'I spy' by describing a 3D object using the words on this worksheet and ask your child to name the object.

Example: "I have a top, a bottom and 4 sides, all of which are the same size. What 3D object am I?"

Sign when completed:

If you are map reading, knowing the compass directions will be helpful.

What compass point is opposite north?

What compass point is opposite east?

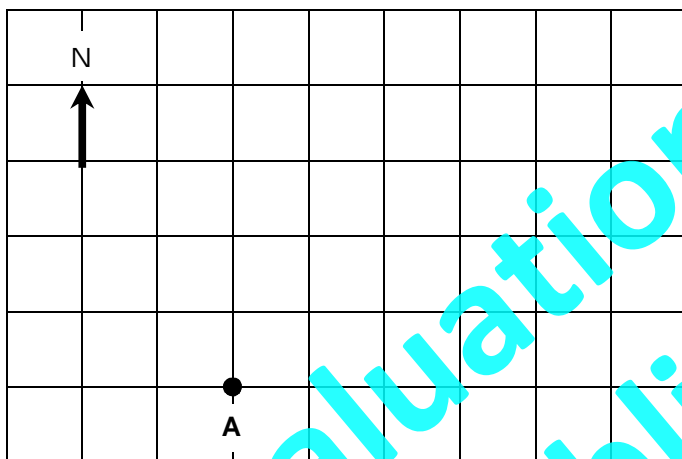
Answers: south and west.



- (1) What do the letters on the compass stand for?

N = \_\_\_\_\_, S = \_\_\_\_\_,

E = \_\_\_\_\_, W = \_\_\_\_\_

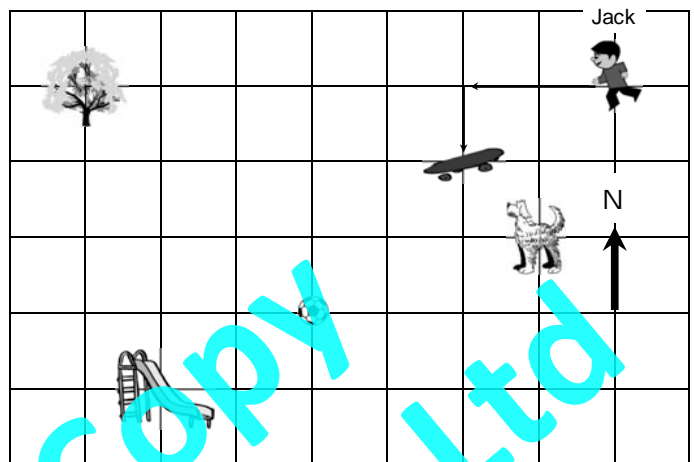


On the grid above, follow each instruction below and **draw** the position of each dot, A to E.

- (2) Starting at point A, go **4 squares east**. **Draw** a dot and mark this point with the letter B.
- (3) Starting at point B, go **1 square east**, then **3 squares north**. **Draw** a dot and mark this point with the letter C.
- (4) Starting at point C, go **1 square north**, then **3 squares west**. **Draw** a dot and mark this point with the letter D.
- (5) Starting at point D, go **3 squares west**, then **1 square south**. **Draw** a dot and mark this point with the letter E.
- (6) **Join** the dots in order ... A, B, C, D, E and back to A.
- (7) **Name** the **shape** you have created.

Below is a map of Jack's backyard.

Each square is **1 metre across** and think of the lines as paths you can walk along.



Jack walked to his skate board. To do this, he walked **2 metres west**, then **1 metre south**.

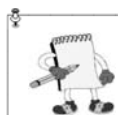
- (8) Use the words **north**, **east**, **south** and **west** to describe how Jack walked from his skate-board to the tree ...

... then from the tree to the slide ...

... then from the slide to his dog ...

... then from his dog to his soccer ball.

- (9) Jack kicked the soccer ball. If it went **4 metres east** and **1 metre south**, draw an **X** on the map to show where it came to rest.
- (10) Jack then kicks the soccer ball **5 metres west** and **3 metres north**. Draw a **Y** on the map to show the new position of the ball.



The aim of this activity sheet is to follow directional instructions to find or create pathways and understand the four points of the compass.

#### Suggested extension activity:

Draw a maze or a map of your home, inside or outside. Create a series of instructions that create pathways that can be drawn on your maze or map or create instructions that your child can physically follow as they walk around your home. Use compass directions as well.

Example: Starting at this tree facing north, take 4 steps towards the shed, turn anti-clockwise west, then take 6 more steps ... etc.

Sign when completed: \_\_\_\_\_

When talking about **rotation**, we use words such as **clockwise**, **anti-clockwise** ...



... **quarter** turn and **half** turn to describe how an object has been moved.

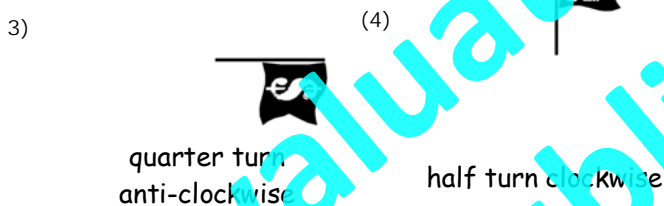


Use the **rotation** words above to **describe** how each arrow has been moved.

The shaded arrow is the new position.

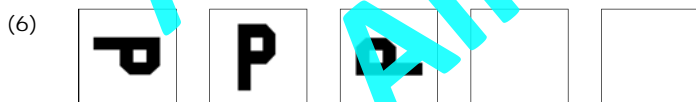


**Draw** which way the flag will be pointing after it has been turned or rotated.

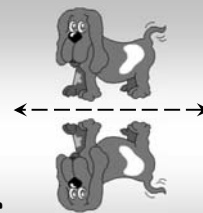


Some alphabet cards have been used to create these patterns using rotation.

**Draw** the next 2 letters for each pattern and **describe** how each pattern was created.



When you look in a mirror, you see your reflection. Everything looks the same, except it is back to front.



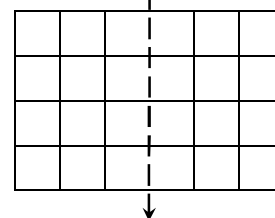
To reflect this picture, the mirror would be placed on the arrowed line.

**Draw** a line to show where the mirror would go to reflect these pictures.



Half of each letter is missing. The arrow is where the mirror is. **Draw** each letter as if you had a mirror.

(17) **Draw** a design that shows you understand reflection. The arrow is the mirror line.



The aim of this activity sheet is to revise rotation and reflection. Rotations can be described using various words and reflections require a mirror line.

#### Suggested extension activity:

Looking around your home, ask your child to point out designs that have been created by either rotating a pattern or reflecting a pattern.

Example: Wallpaper or floor tile patterns.

Ask your child to create their own designs using rotation or reflection and have them describe how they created their design.

Sign when completed: \_\_\_\_\_

This cereal box has been moved by sliding it along a table top.

The cereal box has not been turned around or flipped over.

Such a movement is called a **translation**.



Each group of objects below have been lined up to make a pattern.

**Circle yes** if the objects have been moved by sliding. **No**, if they have not.

(1) yes / no

(2) yes / no

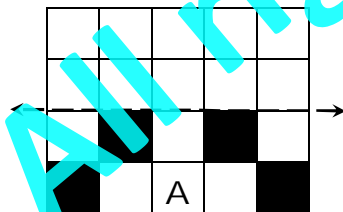
(3) yes / no

(4) **Talk** about how the object patterns above were created if it was not by sliding. Was it by turning (rotation) or flipping (reflection)?

This design was created by translating a shape several times.

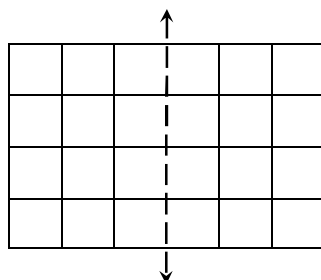


(5) **Translate** this pattern to the opposite side of the arrow, without turning the pattern around or over.

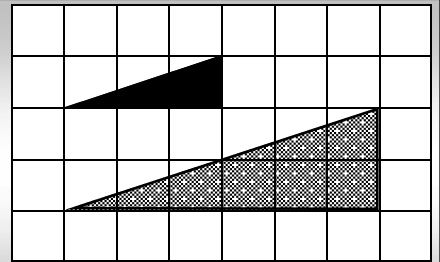


(6) **Draw** a design to show you understand translation.

The same pattern should be on each side of the arrow.



Sam used maths paper to draw this small black triangle twice as big (grey colour).

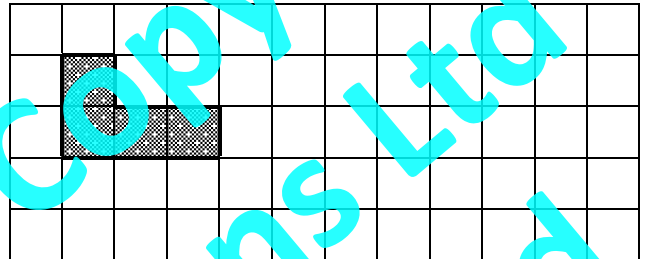


Each side of the triangle is twice as long.

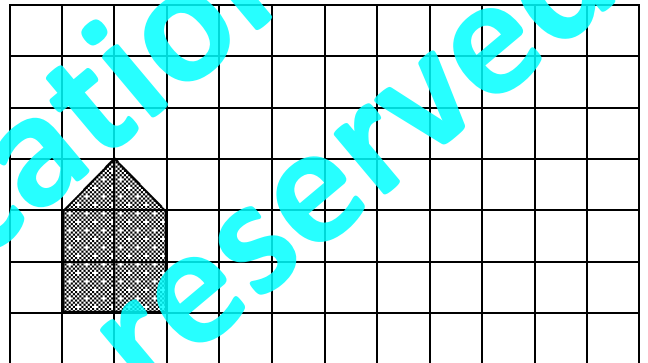
**Redraw** each shape so that all sides are **twice** as long.



(7)

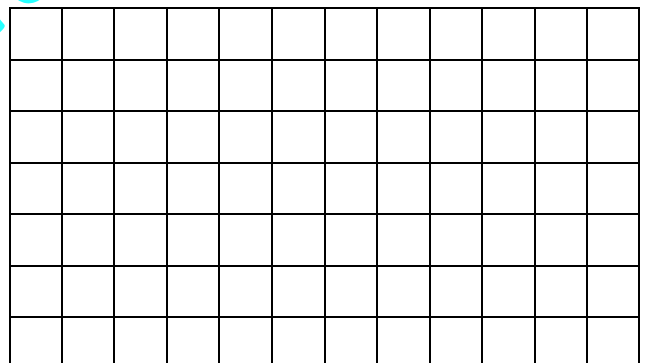


(8)



**Draw** a small shape that you can **redraw** twice as large, to show you understand enlargement.

(9)



The aim of this activity sheet is to revise translation and introduce enlargement. Translation involves sliding the object to a new position. For enlargement, the shape changes size but does not slide, flip or rotate.

#### Suggested extension activity:

Looking around your home, ask your child to point out groups of objects that demonstrate translation or enlargement.

Example: A picket fence, strips of wallpaper, a line of bottles in a row.

Draw various patterns that involve sliding or translation and using maths paper, draw designs involving enlargement.

Sign when completed:

Look at these pictures below ...

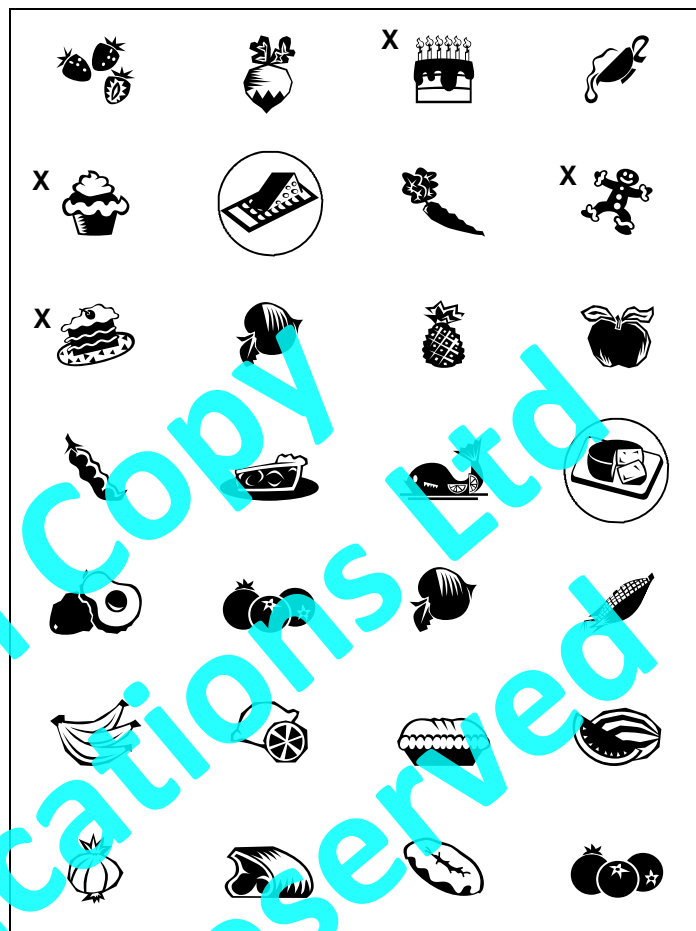


There are many ways these animals can be grouped.



- (1) **Draw** the letter **A** next to the animals that make good pets.
  - (2) **Draw** the letter **B** next to the animals that live in the sea.
  - (3) Why are the **4 circled** items grouped?
- 
- (4) **Draw** a circle around 2 or more items and say why you have grouped them.
- 
- (5) **Talk** about other ways you could sort these animals in groups.

Look at these pictures below ...



- (6) Why are the 2 **circled** food items grouped?
- (7) Why are the food items with an **X** next to them grouped?
- (8) **Draw** a circle around 2 or more items and say why you have grouped them.
- (9) **Talk** about other ways you could sort these food items in groups.



*The aim of this activity sheet is to learn how to sort objects into various groups, based on the characteristics of each object.*

**Suggested extension activity:**

Gather a collection of objects from around your house that can be sorted more than one way.

*Example: Sort different sized blocks by their size or by their colour.*

Ask your child to come up with different ways the objects can be sorted.

Sign when completed:



Pupils in Rooms 6, 7 & 8 were asked what their favourite vegetable was. This table shows the results.



Vegetable				
Number of pupils	17	18	23	32

- (1) How many pupils liked carrots best ()? \_\_\_\_\_
- (2) How many pupils liked onions best ()? \_\_\_\_\_
- (3) How many pupils liked peas best ()? \_\_\_\_\_
- (4) How many pupils liked cabbage best ()? \_\_\_\_\_
- (5) How many pupils in Rooms 6, 7 & 8? \_\_\_\_\_
- (6) Use the tally chart below to work out how many there are of each animal.



Animal	Tally	Total

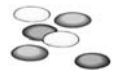
Remember ...

HHH = 5



- (7) How many animals are there altogether? \_\_\_\_\_

Sam conducted a survey to see how many red jelly beans there were in each small packet. These are his results.



- (8) Use the tally chart below to organise this data.

Red jelly beans / packet

2, 3, 5, 4, 6, 2, 3, 5, 5, 4,  
3, 2, 4, 3, 3, 3, 3, 4, 5, 3,  
2, 3, 5, 4, 6, 5, 4, 5, 2, 6

Number of red jelly beans	Tally	Total
2		
3		
4		
5		
6		

- (9) How many packets had 4 red jelly beans? \_\_\_\_\_
- (10) How many packets had 2 red jelly beans? \_\_\_\_\_
- (11) What was the most common number of red jelly beans per packet? \_\_\_\_\_
- (12) What was the least common number of red jelly beans per packet? \_\_\_\_\_
- (13) 7 red jelly beans occurred in how many packets? \_\_\_\_\_
- (14) How many packets of jelly beans did Sam survey? \_\_\_\_\_



The aim of this activity sheet is to understand data presented in tables and create tables by sorting data using tally charts.

#### Suggested extension activity:

Collect information that can be presented in a table. This may require you to ask extended family or friends to answer some questions to collect the data. Then ask your child questions that relate to the data.

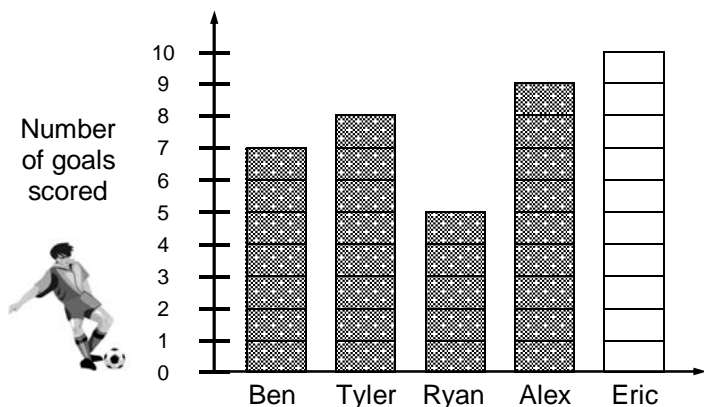
Example: A table showing favourite foods your family / friends eat.

Create your own tables, with made up data and then ask your child to talk about the data in the table.

Sign when completed: \_\_\_\_\_



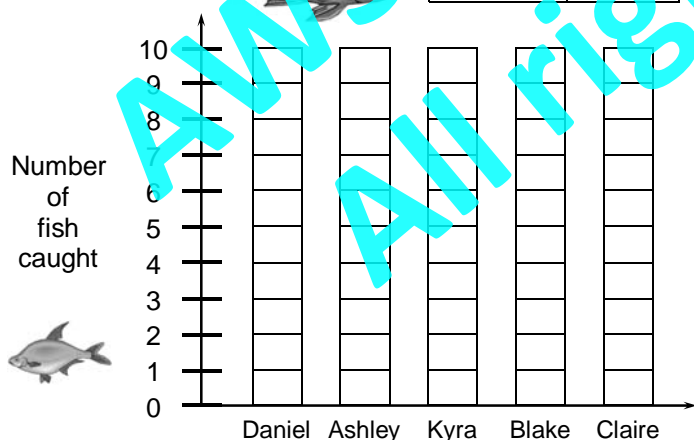
This column graph below shows the number of goals scored by the 5 players in a soccer team.



- (1) How many goals did Alex score? \_\_\_\_\_
- (2) How many goals did Ben score? \_\_\_\_\_
- (3) Who scored 5 goals? \_\_\_\_\_
- (4) If all 5 players scored a total of 35 goals, work out how many goals Eric scored. \_\_\_\_\_
- (5) **Complete** the column graph by shading in the number of goals Eric scored. \_\_\_\_\_

- (6) **Create** a column graph using this data showing the number of fish caught during a fishing competition by five children.

	Total
Daniel	8
Ashley	6
Kyra	9
Blake	5
Claire	7



- (7) Who caught the most fish? \_\_\_\_\_
- (8) Who caught 6 fish? \_\_\_\_\_
- (9) How many fish did they catch altogether? \_\_\_\_\_

This pictogram below shows the favourite fruit that Rooms 6, 7, 8 & 9 pupils like.

Note: Each picture = 4 pieces of fruit



grapes:

apple:

pineapple:

pears:

- (10) How many pupils liked pineapples? \_\_\_\_\_
- (11) Which fruit did 20 pupils like most? \_\_\_\_\_
- (12) Which fruit did most pupils like best? \_\_\_\_\_
- (13) Which fruit did 16 pupils like most? \_\_\_\_\_
- (14) How many pupils are in Rooms 6, 7, 8 & 9 altogether? \_\_\_\_\_

- (15) This table shows the number of soccer goals scored by three boys.



	Total
James	12
Mark	14
Steven	8

Use the numbers in the table to **draw a pictogram**. Each picture (⚽) = 4 goals.

James:

Mark:

Steven:



The aim of this activity sheet is to interpret data presented as a column graph and a pictogram, plus draw these two types of graphs, given appropriate data.

#### Suggested extension activity:

Using data collected from around your home or the data in the tally charts in Worksheet 34, have your child create some column graphs or pictograms. For pictograms involving large groups of data, each picture can be worth more than one.

Example: If there were 30 items, by making each picture worth 5, only 6 pictures would be drawn.

Sign when completed: \_\_\_\_\_

A **stem and leaf graph** looks a bit like a leaf.

*Example:* Jacqui counted the number of red jelly beans in 12 large packets.

29, 31, 28, 42, 38, 27, 35, 33, 41, 34, 36, 26

As these numbers are in the 20's, 30's and 40's, the numbers **2, 3** and **4** go in the '**stem**' part of the graph.



The second numbers form the '**leaf**' part of the graph and are added to the graph in the order listed.

2	9, 8, 7, 6
3	1, 8, 5, 3, 4, 6
4	2, 1

Matthew recorded the number of runs each batsman scored in a cricket match, in a stem and leaf graph.

0	8, 9
1	6, 5, 3
2	5, 7
3	0, 4, 2
4	1



- (1) If the first 4 scores are 8, 9, 16 and 15, what are the other scores shown in this stem and leaf graph?

\_\_\_\_\_

- (2) What was the highest score? \_\_\_\_\_

- (3) What was the lowest score? \_\_\_\_\_

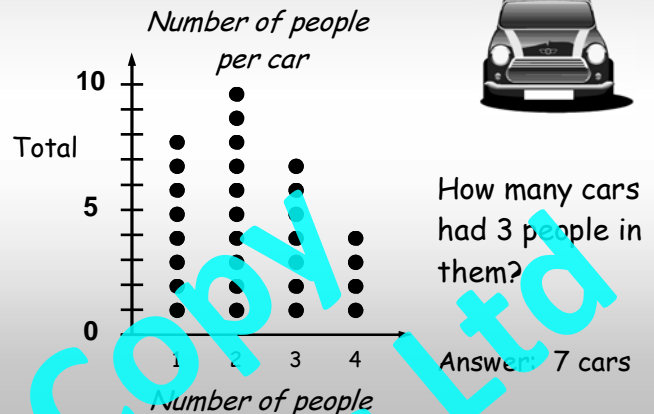
- (4) How many runs did the team score altogether? \_\_\_\_\_



- (5) **Draw** a stem and leaf graph for the numbers in this box.


43, 39,  
67, 51,  
35, 56,  
49, 45,  
50, 44,  
60, 53

Jody recorded the number of people in cars that passed the school gate. Each time a car passed the school gate, she drew a new dot above the number of passengers.



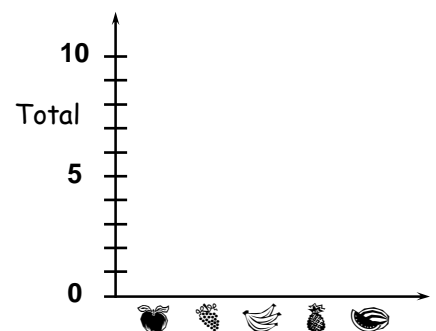
This **dot plot** graph shows the number of boys and girls in Rooms 2 & 3 who like playing rugby.



- (6) How many boys and how many girls play rugby? \_\_\_\_\_, \_\_\_\_\_

- (7) **Draw** a dot plot graph for the data in the table below.

Fruit	Total
	7
	9
	5
	6
	8



The aim of this activity sheet is to introduce, understand and draw stem & leaf graphs and dot plot graphs. Data that is obtained by counting can be graphed this way.

#### Suggested extension activity:

Collect or make up data that can be presented as a stem & leaf graph. This is normally a list of data numbers that have been collected by counting something.

Using data collected from around your home or the data in the tally charts in Worksheet 34, have your child create a dot plot graph. Dot plot graphs are similar to column graphs.

Sign when completed: \_\_\_\_\_

"What pet do Room 7 pupils like more, cats or dogs?" asked Pete.



To answer this question, Pete conducted an investigation by asking a simple question ...

*"Do you like cats or dogs better as a pet?"*

Consider this question ...

*"How do your classmates travel to school?"*

- (1) As you investigate this question, how would you collect, record and organise your data?



- (2) What data displays or graphs could you use to display your results?

- (3) Draw the table that you would use to collect the data and either collect some data or make up some data.

- (4) Draw a column graph, pictogram or dot plot to display your results in Q3.

- (5) Write one statement about your results.

Edgeware Primary School investigated ...  
*"How should the money raised at the school fair be spent?"*



A = buy new sports uniforms

B = buy more plants for the gardens

C = buy more library books

D = buy more playground equipment

A	C	D	B	D	B	A	C	B	B	B	D	C
C	C	A	D	C	B	B	C	D	C	A	D	C
B	C	D	C	C	A	A	D	B	C	A	D	C
B	C	D	C	D	B	C	D	A	C	D	B	C

- (6) Look at the results of their investigation. Write 4 points based on these results.



The aim of this activity sheet is to look at ways a simple investigation can be conducted and at the ways data can be collected and displayed.

#### Suggested extension activity:

Make up an investigation. Ask your child to come up with questions that could be asked, who is going to be asked and how the data is to be collected and displayed.

Example: What is the most popular holiday place in New Zealand?

Sign when completed:

The chance of something happening can be described using one of the words ...

**certain, likely, unlikely, possible and impossible** ... or a similar meaning word.

Example:

"It is **certain** to snow today."

"It is **unlikely** it will snow today."

"It is **possible** it will snow today."



Nicole asked, "If last month was June, is this month May?"



Mark an X on the scale where the answer to Nicole's question would go. (Answer: impossible)

Morgan has a bag of 200 balls.

The bag contains ...



**120** white balls, **50** red balls, **15** blue balls, **10** green balls and **5** black balls.

(10) Morgan is going to take a ball from the bag without looking at it.

Why is a black ball the least likely ball he will pick?



(11) What is the colour of the most likely ball to be picked? \_\_\_\_\_

(12) Mark on the probability scale below where you think these events (A to F) should go ...

**A** = Morgan picks a **blue** ball from the bag.

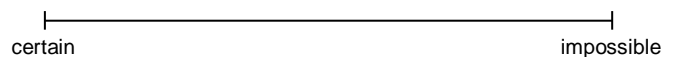
**B** = Morgan picks a **white** ball from the bag.

**C** = Morgan picks a **black** ball from the bag.

**D** = Morgan picks a **red** ball from the bag.

**E** = Morgan picks a **green** ball from the bag.

**F** = Morgan picks a **pink** ball from the bag.



**Write** a word in these sentences that means the same as **possible**.



(1) "Can I go to the movies?" asked Sophia.  
" \_\_\_\_\_ " said mum.

(2) Brian \_\_\_\_\_ helps to wash the dishes.

(3) This week our class \_\_\_\_\_ be going on a ski trip.

**Write** a word in these sentences that means the same as **certain**.



(4) "Can I go to the movies?" asked Sophia.  
" \_\_\_\_\_ " said mum.

(5) Brian \_\_\_\_\_ helps to wash the dishes.

(6) This week our class \_\_\_\_\_ be going on a ski trip.

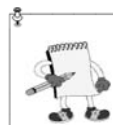
**Write** a word in these sentences that means the same as **impossible**.



(7) "Can I go to the movies?" asked Sophia.  
" \_\_\_\_\_ " said mum.

(8) Brian \_\_\_\_\_ helps to wash the dishes.

(9) This week our class \_\_\_\_\_ be going on a ski trip.



The aim of this activity sheet is to revise previously introduced probability words and ordering of events based on the likelihood of their occurrence using simple probability scales.

#### Suggested extension activity:

Create a list of up to 5 events that can be ordered. Ask your child to place the events in order, based on their likelihood of occurring, from certain to impossible or vice versa.

Create some more events that your child can order and display this order on simple probability scales.

Sign when completed: \_\_\_\_\_



An **outcome** is what happens when you have a choice.

Sometimes finding all possible outcomes can be difficult. Using a **box** or **grid** can help.

*Example: Two coins are tossed in the air.*

	Head (H)	Tail (T)
Head (H)	HH	HT
Tail (T)	TH	TT

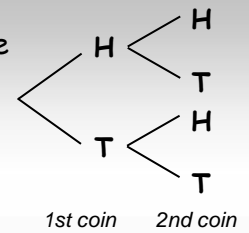
What does HH stand for?

Answer: Both coins showed heads



**Tree diagrams** are another way of working out all possible outcomes.

*Example: Two coins are tossed in the air, list all possible outcomes.*



By following each **branch** of the tree, you can work out all outcomes.

Answer: HH, HT, TH, TT (4 outcomes)



This grid shows the choices Sarah had as to when she would go to the movies and what type of movie she would see.



	Horror (H)	Comedy (C)
Friday (F)	F / H	F / C
Saturday (Sa)	Sa / H	Sa / C
Sunday (Su)	Su / H	Su / C

(1) If Sarah's choice was Sa / H, what does it mean?

(2) How many choices (outcomes) does Sarah have?

For lunch, Liam has a choice of either a sandwich (SW), a salad roll (SR) and a choice of either an apple (A), an orange (O), a pear (P) or a banana (B).

(3) Guess how many possible food choices or outcomes you think Liam has for lunch?

(4) Use this **table** to work out what Liam can eat at lunchtime. (Write letters only)

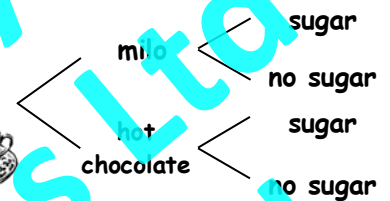
	A	O	P	B
SW				
SR				

(5) What does SR/O mean?

(6) List all possible choices.

(7) How many choices (outcomes) does Liam have?

Sally has a choice of milo or hot chocolate, with or without sugar.

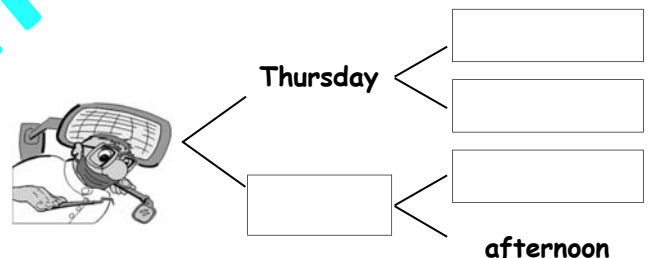


(8) Use the tree diagram to list all possible choices or outcomes.

Allison has to make a dentist's appointment for either Thursday or Friday, either in the morning or the afternoon.



(9) **Write** in the missing words to complete this tree diagram to show all possible outcomes.



(10) How many possible outcomes are there?



The aim of this activity sheet is to work out all possible outcomes given an event using grids or tree diagrams. The **event** can be as simple as tossing a coin, where there are two possible **outcomes**, heads or tails.

#### Suggested extension activity:

Create events that involve choices which your child can use grids or tree diagrams to name all possible outcomes.

*Example: You are allowed two jelly beans from this packet. List all the possible colours the jelly beans could be. i.e. red/black. red/white.*

Sign when completed:



In Dylan's group there are 15 pupils.  
What **chance** or **probability** does he have of being group leader?



If there are 15 pupils in his group and only one of him, he has **1 chance in 15** of being group leader.

Written as **1 out of 15** or  $\frac{1}{15}$ .

These cards of vehicles are to be used for a game of memory.



- (1) If a coin is tossed in the air, what is the chance that it lands on heads?  
\_\_\_\_\_ out of \_\_\_\_\_ or \_\_\_\_\_

- (2) Sam has been selling raffle tickets.  
If there are 100 tickets, what is the chance of winning first prize?  
\_\_\_\_\_ out of \_\_\_\_\_ or \_\_\_\_\_

- (3) Karen has bought 10 tickets in a raffle.  
If there are 100 tickets, what is the chance of her winning a prize?  
\_\_\_\_\_ out of \_\_\_\_\_ or \_\_\_\_\_

- (4) If you bought 2 tickets in a raffle and have a 1 out of 500 chance of winning a raffle, how many tickets are in the raffle?  
\_\_\_\_\_ out of \_\_\_\_\_ or \_\_\_\_\_

- (5) If you roll a six sided die (dice), what is the chance that ...



... the number 3 comes up?

\_\_\_\_\_ out of \_\_\_\_\_ or \_\_\_\_\_

... a number 4, 5 or 6 comes up?

\_\_\_\_\_ out of \_\_\_\_\_ or \_\_\_\_\_

... the number 7 comes up?

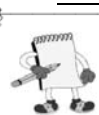
\_\_\_\_\_ out of \_\_\_\_\_ or \_\_\_\_\_

- (6) In a bag there are 40 marbles.  
If the chance of taking a blue marble out of the bag is  $\frac{1}{4}$   
how many blue marbles are in the bag?



If the chance of taking a black marble out of the bag is  $\frac{1}{5}$   
how many black marbles are in the bag?

- (7) How many plane cards are there? \_\_\_\_\_
- (8) How many police car cards are there? \_\_\_\_\_
- (9) How many motorcycle cards are there? \_\_\_\_\_
- (10) How many breakdown truck cards are there? \_\_\_\_\_
- (11) How many cards are there altogether? \_\_\_\_\_
- (12) What is the chance of turning over a police car card?  
\_\_\_\_\_ out of \_\_\_\_\_ or \_\_\_\_\_
- (13) What is the chance of turning over a plane card?  
\_\_\_\_\_ out of \_\_\_\_\_ or \_\_\_\_\_
- (14) What is the chance of turning over a breakdown truck card?  
\_\_\_\_\_ out of \_\_\_\_\_ or \_\_\_\_\_
- (15) Why do you have a greater chance of turning over a plane card than a motorcycle card?  
\_\_\_\_\_



The aim of this activity sheet is to investigate simple probability, working out the chance of something happening. Probability can be expressed as a fraction, such as  $\frac{1}{4}$ , which means one out of four.

#### Suggested extension activity:

Create similar questions as on this activity sheet to reinforce simple probability.

Example: Place 5 red, 3 green and 2 white blocks in a bag.

Ask your child to select a particular coloured block and describe the chance of selecting that block ... 2 out of 10 chances (a white block).

Sign when completed: \_\_\_\_\_

Addition and subtraction facts presented in this resource:

Family of Facts
$1 + 1 = 2$
$2 - 1 = 1$
$1 + 2 = 3$
$2 + 1 = 3$
$3 - 2 = 1$
$3 - 1 = 2$
$1 + 3 = 4$
$3 + 1 = 4$
$4 - 3 = 1$
$4 - 1 = 3$

Family of Facts
$2 + 2 = 4$
$4 - 2 = 2$
$1 + 4 = 5$
$4 + 1 = 5$
$5 - 4 = 1$
$5 - 1 = 4$
$2 + 3 = 5$
$3 + 2 = 5$
$5 - 3 = 2$
$5 - 2 = 3$

Family of Facts
$1 + 5 = 6$
$5 + 1 = 6$
$6 - 5 = 1$
$6 - 1 = 5$
$2 + 4 = 6$
$4 + 2 = 6$
$6 - 4 = 2$
$6 - 2 = 4$
$3 + 3 = 6$
$6 - 3 = 3$

Family of Facts
$1 + 6 = 7$
$6 + 1 = 7$
$7 - 6 = 1$
$7 - 1 = 6$
$2 + 5 = 7$
$5 + 2 = 7$
$7 - 5 = 2$
$7 - 2 = 5$
$3 + 4 = 7$
$4 + 3 = 7$
$7 - 4 = 3$
$7 - 3 = 4$

Family of Facts
$1 + 7 = 8$
$7 + 1 = 8$
$8 - 7 = 1$
$8 - 1 = 7$
$2 + 6 = 8$
$6 + 2 = 8$
$8 - 6 = 2$
$8 - 2 = 6$
$3 + 5 = 8$
$5 + 3 = 8$
$8 - 5 = 3$
$8 - 3 = 5$

Family of Facts
$4 + 4 = 8$
$8 - 4 = 4$
$1 + 8 = 9$
$8 + 1 = 9$
$9 - 8 = 1$
$9 - 1 = 8$
$2 + 7 = 9$
$7 + 2 = 9$
$9 - 7 = 2$
$9 - 2 = 7$

Family of Facts
$3 + 6 = 9$
$6 + 3 = 9$
$9 - 6 = 3$
$9 - 3 = 6$
$4 + 5 = 9$
$5 + 4 = 9$
$9 - 5 = 4$
$9 - 4 = 5$
$1 + 9 = 10$
$9 + 1 = 10$
$10 - 9 = 1$
$10 - 1 = 9$

Family of Facts
$2 + 8 = 10$
$8 + 2 = 10$
$10 - 8 = 2$
$10 - 2 = 8$
$3 + 7 = 10$
$7 + 3 = 10$
$10 - 7 = 3$
$10 - 3 = 7$
$4 + 6 = 10$
$6 + 4 = 10$
$10 - 6 = 4$
$10 - 4 = 6$

Family of Facts
$5 + 5 = 10$
$10 - 5 = 5$
$9 + 2 = 11$
$2 + 9 = 11$
$11 - 2 = 9$
$11 - 9 = 2$
$8 + 3 = 11$
$3 + 8 = 11$
$11 - 3 = 8$
$11 - 8 = 3$

Family of Facts
$7 + 4 = 11$
$4 + 7 = 11$
$11 - 4 = 7$
$11 - 7 = 4$
$6 + 5 = 11$
$5 + 6 = 11$
$11 - 5 = 6$
$11 - 6 = 5$
$9 + 3 = 12$
$3 + 9 = 12$
$12 - 3 = 9$
$12 - 9 = 3$

Family of Facts
$8 + 4 = 12$
$4 + 8 = 12$
$12 - 4 = 8$
$12 - 8 = 4$
$7 + 5 = 12$
$5 + 7 = 12$
$12 - 5 = 7$
$12 - 7 = 5$
$6 + 6 = 12$
$12 - 6 = 6$

Family of Facts
$9 + 4 = 13$
$4 + 9 = 13$
$13 - 4 = 9$
$13 - 9 = 4$
$8 + 5 = 13$
$5 + 8 = 13$
$13 - 5 = 8$
$13 - 8 = 5$
$7 + 6 = 13$
$6 + 7 = 13$
$13 - 6 = 7$
$13 - 7 = 6$

Family of Facts				
9	+	5	=	14
5	+	9	=	14
14	-	5	=	9
14	-	9	=	5
8	+	6	=	14
6	+	8	=	14
14	-	6	=	8
14	-	8	=	6
7	+	7	=	14
14	-	7	=	7

Family of Facts				
9	+	6	=	15
6	+	9	=	15
15	-	6	=	9
15	-	9	=	6
8	+	7	=	15
7	+	8	=	15
15	-	7	=	8
15	-	8	=	7
9	+	7	=	16
7	+	9	=	16
16	-	7	=	9
16	-	9	=	7

Family of Facts				
8	+	8	=	16
16	-	8	=	8
9	+	8	=	17
8	+	9	=	17
17	-	8	=	9
17	-	9	=	8
9	+	9	=	18
18	-	9	=	9

1 to 100 Number Matrix:

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Multiplication facts presented in this resource.

2x Multiplication facts				
1	x	2	=	2
2	x	2	=	4
3	x	2	=	6
4	x	2	=	8
5	x	2	=	10
6	x	2	=	12
7	x	2	=	14
8	x	2	=	16
9	x	2	=	18
10	x	2	=	20

2x Division facts				
2	÷	2	=	1
4	÷	2	=	2
6	÷	2	=	3
8	÷	2	=	4
10	÷	2	=	5
12	÷	2	=	6
14	÷	2	=	7
16	÷	2	=	8
18	÷	2	=	9
20	÷	2	=	10

10x Multiplication facts				
1	x	10	=	10
2	x	10	=	20
3	x	10	=	30
4	x	10	=	40
5	x	10	=	50
6	x	10	=	60
7	x	10	=	70
8	x	10	=	80
9	x	10	=	90
10	x	10	=	100

10x Division facts				
10	÷	10	=	1
20	÷	10	=	2
30	÷	10	=	3
40	÷	10	=	4
50	÷	10	=	5
60	÷	10	=	6
70	÷	10	=	7
80	÷	10	=	8
90	÷	10	=	9
100	÷	10	=	10

3x Multiplication facts				
1	x	3	=	3
2	x	3	=	6
3	x	3	=	9
4	x	3	=	12
5	x	3	=	15
6	x	3	=	18
7	x	3	=	21
8	x	3	=	24
9	x	3	=	27
10	x	3	=	30

3x Division facts				
3	÷	3	=	1
6	÷	3	=	2
9	÷	3	=	3
12	÷	3	=	4
15	÷	3	=	5
18	÷	3	=	6
21	÷	3	=	7
24	÷	3	=	8
27	÷	3	=	9
30	÷	3	=	10

5x Multiplication facts				
1	x	5	=	5
2	x	5	=	10
3	x	5	=	15
4	x	5	=	20
5	x	5	=	25
6	x	5	=	30
7	x	5	=	35
8	x	5	=	40
9	x	5	=	45
10	x	5	=	50

5x Division facts				
5	÷	5	=	1
10	÷	5	=	2
15	÷	5	=	3
20	÷	5	=	4
25	÷	5	=	5
30	÷	5	=	6
35	÷	5	=	7
40	÷	5	=	8
45	÷	5	=	9
50	÷	5	=	10

4x Multiplication facts				
1	x	4	=	4
2	x	4	=	8
3	x	4	=	12
4	x	4	=	16
5	x	4	=	20
6	x	4	=	24
7	x	4	=	28
8	x	4	=	32
9	x	4	=	36
10	x	4	=	40

4x Division facts				
4	÷	4	=	1
8	÷	4	=	2
12	÷	4	=	3
16	÷	4	=	4
20	÷	4	=	5
24	÷	4	=	6
28	÷	4	=	7
32	÷	4	=	8
36	÷	4	=	9
40	÷	4	=	10

6x Multiplication facts				
1	x	6	=	6
2	x	6	=	12
3	x	6	=	18
4	x	6	=	24
5	x	6	=	30
6	x	6	=	36
7	x	6	=	42
8	x	6	=	48
9	x	6	=	54
10	x	6	=	60

6x Division facts				
6	÷	6	=	1
12	÷	6	=	2
18	÷	6	=	3
24	÷	6	=	4
30	÷	6	=	5
36	÷	6	=	6
42	÷	6	=	7
48	÷	6	=	8
54	÷	6	=	9
60	÷	6	=	10