

Written in  
NZ for NZ

# Help Me at HOME Series



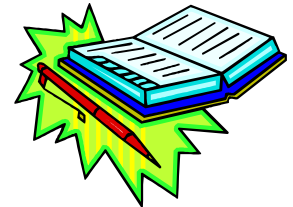
## Number Knowledge Worksheets

A Teacher's resource supplied as PHOTOCOPY MASTERS

### Book 8a



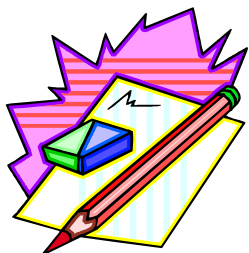
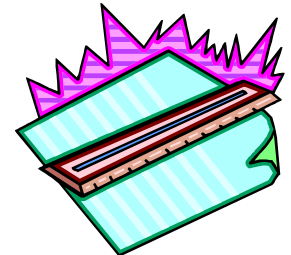
This resource contains  
**40 NUMBER KNOWLEDGE  
WORKSHEETS**



and supports the  
**Numeracy Professional Development  
Project Stages 6 to 8**



This resource is to be used in conjunction  
with **Book 8b** which covers **Level 5** of the  
achievement objectives as outlined in the  
**Mathematics in the New Zealand  
Curriculum** for the strands ...  
**Number & Algebra, Measurement &  
Geometry and Statistics.**



Author: A. W. Stark



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## Mathematics Student Workbook

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

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AH8a

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**AWS Publications Ltd**

First Published October 2008

Formatting and publishing by  
Andrew Stark

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AH8a



## Note from the author:

About this resource ...

### Help Me at Home Number Knowledge Worksheets

- Book 8a (Code: AH8a)

... is one of a series of **TWO sets** of 8 resources and has been written to support the **Numeracy Professional Development Project** currently being implemented within many New Zealand schools.

Resource Book 8a is to be used in conjunction with a second resource, Book 8b.

### Help Me at Home Curriculum Strand Worksheets

- Book 8b (Code: AH8b)

Book 7b has been written to cover 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.

#### 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.

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 children learn the numeracy facts is not as important as knowing them. These resources are designed to systematically introduce and revise the key numeracy facts.

#### How to use these resources:

There are **2 sets** of 8 resources in this series.

The table opposite shows the suggested Year Group each book can be used at, but this is only a suggestion.

*Example: 1 - 2 - 3 means it is likely to be used at Year 2, the bold underlined number.*

| Book    | Resource Code | Suggested Year Group (underlined) | Strategy Stages covered | Curriculum Level |
|---------|---------------|-----------------------------------|-------------------------|------------------|
| 1a / 1b | AH1a & AH1b   | 1 - <u>2</u> - 3                  | 1 to 3                  | 1                |
| 2a / 2b | AH2a & AH2b   | 2 - <u>3</u> - 4                  | 4                       | 1 / 2            |
| 3a / 3b | AH3a & AH3b   | 3 - <u>4</u> - 5                  | 4 & 5                   | 2                |
| 4a / 4b | AH4a & AH4b   | 4 - <u>5</u> - 6                  | 5 & 6                   | 2 / 3            |
| 5a / 5b | AH5a & AH5b   | 5 - <u>6</u> - 7                  | 6 & 7                   | 3                |
| 6a / 6b | AH6a & AH6b   | 6 - <u>7</u> - 8                  | 6 & 7                   | 3 / 4            |
| 7a / 7b | AH7a & AH7b   | 7 - <u>8</u> - 9                  | 6 to 8                  | 4                |
| 8a / 8b | AH8a & AH8b   | 8 - <u>9</u> - 10                 | 6 to 8                  | 5                |

#### Why so many resources?

##### A note for Teachers

There are 2 sets of 8 resources in this series to allow you to have a different book available each year for classes which are made up of mixed year groups. This will stop the problem of a student saying "We used this book last year!". Which book you use for your class is up to your professional judgement, taking into account which resource classes above or below your class might use.

# How to use these TWO resources - Book 8a & Book 8b



## Book AH8a

### 40x Number Knowledge Worksheets

- This resource systematically introduces and revises the number knowledge, presented in various formats.
- Designed to reinforce the Numeracy Professional Development Project, it is intended that one worksheet per week is completed in order from worksheet 1 to worksheet 40.
- One worksheet per week is to be done in conjunction with one worksheet selected from the **Curriculum Strand Worksheet** resource (**Book 8b**).
- **Book 8a** covers the **Strategy Stages** 6 to 8.

#### Note to Teachers:

- The aim of these TWO resources (**AH8a & AH8b**) are to provide the classroom teacher with a systematic and comprehensive series of worksheets, which form the basis of your mathematics homework.

#### Worksheets from Book 8a:

- **Photocopy** weekly and sequentially in order, a **Number Knowledge** worksheet from **Book 8a**. On the Number Knowledge worksheet, pupils can record their **Name, Term, Week** and the **Curriculum Strand Worksheet** that is also to be done that week.

#### Worksheets from Book 8b:

- **Select** and **photocopy** the appropriate **Curriculum Strand Worksheet** required, as determined by what you are currently teaching in class or a topic you are revising. In the table on the next page, record the curriculum worksheet being used each week.

Select ONE worksheet from each book to make up your homework worksheet

## Book AH8b

### 40x Curriculum Strand Worksheets

- The **40 worksheets** in this resource 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.
- One worksheet is selected per week to be done in conjunction with one worksheet from the **Number Knowledge Worksheet** resource (**Book 8a**).
- The worksheet selected per week relates to the topic being covered at school or as revision.
- **Book 8b** covers Level 5 of the **Curriculum**.

#### Extension Activity for Parents:

- Each **Curriculum Strand Worksheet** has an **AT HOME** activity as an extension activity for parents or caregivers.
- 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.
- Either staple the two worksheets together or create a double sided homework sheet.

## Book 8a (AH8a) - Number Knowledge Worksheets

| Number Knowledge Worksheet | Term & Week<br>Enter details below | Curriculum Strand Worksheet<br>Enter the worksheet number issued each week |
|----------------------------|------------------------------------|--|
| 1                          | Term:    Week:                     |  |
| 2                          | Term:    Week:                     |  |
| 3                          | Term:    Week:                     |  |
| 4                          | Term:    Week:                     |  |
| 5                          | Term:    Week:                     |  |
| 6                          | Term:    Week:                     |  |
| 7                          | Term:    Week:                     |  |
| 8                          | Term:    Week:                     |  |
| 9                          | Term:    Week:                     |  |
| 10                         | Term:    Week:                     |  |
| 11                         | Term:    Week:                     |  |
| 12                         | Term:    Week:                     |  |
| 13                         | Term:    Week:                     |  |
| 14                         | Term:    Week:                     |  |
| 15                         | Term:    Week:                     |  |
| 16                         | Term:    Week:                     |  |
| 17                         | Term:    Week:                     |  |
| 18                         | Term:    Week:                     |  |
| 19                         | Term:    Week:                     |  |
| 20                         | Term:    Week:                     |  |

| Number Knowledge Worksheet | Term & Week<br>Enter details below | Curriculum Strand Worksheet<br>Enter the worksheet number issued each week |
|----------------------------|------------------------------------|--|
| 21                         | Term:    Week:                     |  |
| 22                         | Term:    Week:                     |  |
| 23                         | Term:    Week:                     |  |
| 24                         | Term:    Week:                     |  |
| 25                         | Term:    Week:                     |  |
| 26                         | Term:    Week:                     |  |
| 27                         | Term:    Week:                     |  |
| 28                         | Term:    Week:                     |  |
| 29                         | Term:    Week:                     |  |
| 30                         | Term:    Week:                     |  |
| 31                         | Term:    Week:                     |  |
| 32                         | Term:    Week:                     |  |
| 33                         | Term:    Week:                     |  |
| 34                         | Term:    Week:                     |  |
| 35                         | Term:    Week:                     |  |
| 36                         | Term:    Week:                     |  |
| 37                         | Term:    Week:                     |  |
| 38                         | Term:    Week:                     |  |
| 39                         | Term:    Week:                     |  |
| 40                         | Term:    Week:                     |  |



# Book 8b (AH8b) - Curriculum Strand Worksheets

(Tick next to worksheet as each ONE worksheet is issued per week)

|    |  |             |    |   |             |
|----|--|-------------|----|---|-------------|
| 1  | Revision                               | <i>Tick</i> | 21 | Area - Square / rectangle / triangle      | <i>Tick</i> |
| 2  | Addition & subtraction strategies      |             | 22 | Area - Parallelogram / trapezium / circle |             |
| 3  | Multiplication & division strategies   |             | 23 | Circles - circumference & area            |             |
| 4  | Working with decimals                  |             | 24 | Volume                                    |             |
| 5  | Powers & Order of operations           |             | 25 | Reading and drawing angles                |             |
| 6  | Decimal place / Significant figures    |             | 26 | Angle rule revision                       |             |
| 7  | Fractions / decimals / percentages     |             | 27 | Interior angle sum of polygons            |             |
| 8  | Equivalent fractions / simplifying     |             | 28 | Angles & parallel lines                   |             |
| 9  | More fractions                         |             | 29 | Compass points and compass bearings       |             |
| 10 | Working with percentages               |             | 30 | Constructions & loci                      |             |
| 11 | Positive & negative numbers / Integers |             | 31 | Pythagoras and trigonometry ratios        |             |
| 12 | Standard form ó ordinary numbers       |             | 32 | Using trigonometry ratios                 |             |
| 13 | Ratio & rates                          |             | 33 | Reflection & Rotation                     |             |
| 14 | Number patterns or sequences           |             | 34 | Enlargement & Translation                 |             |
| 15 | 'Like' terms, expanding & factorising  |             | 35 | Mean, median, mode and the range          |             |
| 16 | Solving linear equations               |             | 36 | Discrete / continuous data and histograms |             |
| 17 | Plotting ordered pairs / linear graphs |             | 37 | Graphs - 1                                |             |
| 18 | The metric system                      |             | 38 | Box & Whisker graphs and Pie graphs       |             |
| 19 | 2-D and 3-D shapes / Nets              |             | 39 | Probability calculations                  |             |
| 20 | Perimeter                              |             | 40 | Finding outcomes & probabilities          |             |

## Number Knowledge Worksheet Section

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The following activities are covered in worksheets 1 to 10:

- **EIGHTY activities involving ...**
    - skip counting in multiples, stating numbers that come before after or between given numbers;
    - writing decimals as number words and number words as decimals;
    - ordering numbers and decimals;
    - adding numbers in a matrix;
    - exploring place value using money, whole numbers and decimals,
    - rounding numbers to the nearest 10, 100, 1000, 10th or 100th and finding estimated answers;
    - finding a fraction of a group of shapes, a whole number or a decimal and creating equivalent fractions;
    - Finding the multiples or factors for given numbers;
    - converting between improper fractions and mixed numbers;
    - converting between commonly used fractions, decimals and percentages;
    - finding a percentage of a whole number or decimal;
    - finding the square or square root of a number;
    - adding and subtracting integers;
  - Using appropriate **number strategies** to revise the number **combinations that add up to and include 18**, including subtraction combinations.  
*Example:*  $93.04 + 40.6 + 8.3 = \underline{\hspace{2cm}}$ ,  $24.75 + \underline{\hspace{2cm}} + 69 = 130.45$  etc.
  - Using appropriate **number strategies** to revise **multiplication and division facts** up to  $10 \times 10$ .  
*Example:*  $368 \times 5 = (\underline{\hspace{1cm}} \times \underline{\hspace{1cm}}) - (\underline{\hspace{1cm}} \times \underline{\hspace{1cm}})$  etc.
- 

The following activities are covered in worksheets 11 to 20:

- **EIGHTY activities involving ...**
    - skip counting in multiples, stating numbers that come before after or between given numbers;
    - writing decimals as number words and number words as decimals;
    - ordering numbers and decimals;
    - adding numbers in a matrix;
    - exploring place value using money, whole numbers and decimals,
    - rounding numbers to the nearest 10, 100, 1000, 10th or 100th and finding estimated answers;
    - finding a fraction of a group of shapes, a whole number or a decimal and creating equivalent fractions;
    - finding the multiples and factors for given numbers;
    - converting between improper fractions and mixed numbers;
    - multiplying and dividing large numbers or decimals by 10, 100 or 1000;
    - order of operations, BEDMAS;
    - converting between commonly used fractions, decimals and percentages;
    - finding a percentage of a whole number or decimal;
    - finding the square or square root of a number;
    - adding and subtracting integers;
    - completing ratios;
    - solving equations;
    - simple word problems.
  - Using appropriate **number strategies** to revise the number **combinations that add up to and include 18**, including subtraction combinations.
  - Using appropriate **number strategies** to revise **multiplication and division facts** up to  $10 \times 10$ .
-

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The following activities are covered in worksheets 21 to 30:

- **EIGHTY activities involving ...**
  - skip counting in multiples, stating numbers that come before after or between given numbers;
  - writing decimals as number words and number words as decimals;
  - ordering numbers and decimals;
  - adding numbers in a matrix;
  - exploring place value using money, whole numbers and decimals,
  - rounding numbers to the nearest 10, 100, 1000, 10th or 100th and finding estimated answers;
  - rounding numbers and decimal using decimal places or significant figures;
  - finding a fraction of a group of shapes, a whole number or a decimal and creating equivalent fractions;
  - finding the multiples and factors for given numbers;
  - converting between improper fractions and mixed numbers;
  - multiplying and dividing large numbers or decimals by 10, 100 or 1000;
  - converting between ordinary numbers and standard form;
  - order of operations, BEDMAS;
  - converting between commonly used fractions, decimals and percentages;
  - finding a percentage of a whole number or decimal;
  - finding the square or square root of a number and other powers;
  - adding and subtracting integers;
  - adding and subtracting simple fractions;
  - completing ratios;
  - solving equations involving mixed number answers;
  - simple word problems, some involving rates.
- Using appropriate **number strategies** to revise the number **combinations that add up to and include 18**, including subtraction combinations.
- Using appropriate **number strategies** to revise **multiplication and division facts** up to 10 x 10.

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The following activities are covered in worksheets 31 to 40:

- **EIGHTY activities involving ...**
    - skip counting in multiples, stating numbers that come before after or between given numbers;
    - writing decimals as number words and number words as decimals;
    - ordering numbers and decimals;
    - adding numbers in a matrix;
    - exploring place value using money, whole numbers and decimals,
    - rounding numbers to the nearest 10, 100, 1000, 10th or 100th and finding estimated answers;
    - rounding numbers and decimal using decimal places or significant figures;
    - finding a fraction of a group of shapes, a whole number or a decimal and creating equivalent fractions;
    - finding the multiples and factors for given numbers;
    - converting between improper fractions and mixed numbers;
    - multiplying and dividing large numbers or decimals by 10, 100 or 1000;
    - converting between ordinary numbers and standard form;
    - order of operations, BEDMAS;
    - converting between commonly used fractions, decimals and percentages;
    - finding a percentage of a whole number or decimal;
    - finding the square or square root of a number and other powers;
    - adding and subtracting integers;
    - adding and subtracting simple fractions;
    - completing ratios;
    - solving equations involving mixed number answers;
    - simple word problems, some involving rates.
  - Using appropriate **number strategies** to revise the number **combinations that add up to and include 18**, including subtraction combinations.
  - Using appropriate **number strategies** to revise **multiplication and division facts** up to 10 x 10.
-



- (1) Write in the missing numbers as you skip count in 9's.



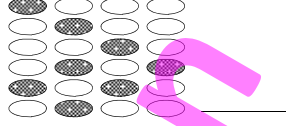
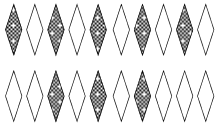
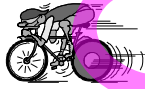
\_\_\_\_\_, 18, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, 63, \_\_\_\_\_  
81, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, 135

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

231 = \_\_\_\_\_      683 = \_\_\_\_\_

1465 = \_\_\_\_\_      3249 = \_\_\_\_\_

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



- (4) Fill in the missing fractions, decimals or percentages.



| fraction      | decimal | percentage |
|---------------|---------|------------|
| $\frac{1}{4}$ | ↔       | ↔          |
| ↔             | ↔       | 60%        |
| ↔             | 0.7     | ↔          |

- (5) Adding large numbers.

252  
3143 + 732 + 13 = \_\_\_\_\_      63  
471 + 26 + 534 = \_\_\_\_\_      10936  
72 + 494 + 4124 = \_\_\_\_\_      + 512

- (6) Subtracting large numbers.

1298 - 53 = \_\_\_\_\_      5647  
13427 - 965 = \_\_\_\_\_      - 482  
27385 - 3621 = \_\_\_\_\_

- (7) Multiplying large numbers using place value.

Example:  $231 \times 3 = (200 \times 3) + (30 \times 3) + (1 \times 3) = 600 + 90 + 3 = 693$

$348 \times 4 = (\text{ } \times \text{ }) + (\text{ } \times \text{ }) + (\text{ } \times \text{ })$   
= \_\_\_\_\_ + \_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_

- (8) Dividing large numbers.

$2 \overline{) 756}$        $5 \overline{) 1275}$   
 $3 \overline{) 612}$        $4 \overline{) 2684}$

Working Space

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



0.25  
2.06  
2  
20.04  
0.029

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

Working Space

- (2) List the first 5 multiples of these numbers.

2 = \_\_\_\_\_ 5 = \_\_\_\_\_

7 = \_\_\_\_\_ 10 = \_\_\_\_\_

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

563 = \_\_\_\_\_ 946 = \_\_\_\_\_

1470 = \_\_\_\_\_ 2150 = \_\_\_\_\_

- (4) Convert these percentages to decimals.

50% = \_\_\_\_\_ 80% = \_\_\_\_\_ 25% = \_\_\_\_\_

37% = \_\_\_\_\_ 75% = \_\_\_\_\_ 8% = \_\_\_\_\_

- (5) Adding large numbers.

$462 + 14 + 2738 =$  \_\_\_\_\_  $\begin{array}{r} 1675 \\ 81 \end{array}$

$535 +$  \_\_\_\_\_  $+ 47 = 3412$   $\begin{array}{r} 32523 \\ + 426 \end{array}$

$41 + 972 +$  \_\_\_\_\_  $= 1670$  \_\_\_\_\_

- (6) Subtracting large numbers.

$3286 -$  \_\_\_\_\_  $= 2516$   $\begin{array}{r} 15539 \\ - \end{array}$

\_\_\_\_\_  $- 2608 = 974$  \_\_\_\_\_

$21573 -$  \_\_\_\_\_  $= 19706$   $\begin{array}{r} 6351 \end{array}$

- (7) Multiplying whole numbers.

$579$   $341$  \_\_\_\_\_  $\begin{array}{r} 920 \\ \times 23 \end{array}$

$\times 5$   $\times 6$  \_\_\_\_\_

- (8) Dividing large numbers using multiples of 10.

Example:  $145 \div 5 = (100 \div 5) + (45 \div 5) = 20 + 9 = 29$

$436 \div 4 =$  ( \_\_\_\_\_  $\div$  \_\_\_\_\_ )  $+$  ( \_\_\_\_\_  $\div$  \_\_\_\_\_ )

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

- (1) **Skip counting in 8's, write the number that comes after ...**



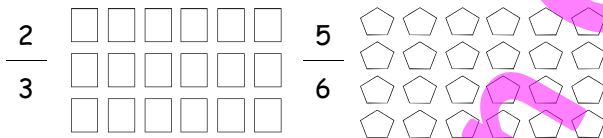
24, \_\_\_\_\_ 64, \_\_\_\_\_ 72, \_\_\_\_\_

- (2) **Round these numbers to the nearest 10 or 100 and then work out an estimated answer.**

$$89 + 104 + 493 = \underline{\quad} + \underline{\quad} + \underline{\quad} = \underline{\quad}$$

$$1308 - 783 = \underline{\quad} - \underline{\quad} = \underline{\quad}$$

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



- (4) **Convert these decimals to percentages.**

$$0.5 = \underline{\quad\quad\quad} \quad 0.75 = \underline{\quad\quad\quad} \quad 0.4 = \underline{\quad\quad\quad}$$

$$0.67 = \underline{\quad\quad\quad} \quad 0.09 = \underline{\quad\quad\quad} \quad 0.9 = \underline{\quad\quad\quad}$$

- (5) **Adding decimals.**

|  |        |
|--|--------|
|  | 341.8  |
| $93.04 + 40.6 + 8.3 = \underline{\quad\quad\quad}$ | 2.8    |
| $4.94 + 5 + 38.7 = \underline{\quad\quad\quad}$    | 5291.0 |
|  | + 38.4 |
| $59 + 1.86 + 94.3 = \underline{\quad\quad\quad}$   |        |

- (6) **Subtracting decimals.**

|  |        |
|--|--------|
| $316.2 - 29.4 = \underline{\quad\quad\quad}$   | 38.95  |
| $578.27 - 85.84 = \underline{\quad\quad\quad}$ | - 7.28 |
| $298.62 - 43.9 = \underline{\quad\quad\quad}$  |        |

- (7) **Multiplying large numbers using 'tidy' numbers.**

Example:  $296 \times 3 = (300 \times 3) - (4 \times 3) = 900 - 12 = 888$

$$368 \times 5 = (\underline{\quad} \times \underline{\quad}) - (\underline{\quad} \times \underline{\quad})$$

$$= \underline{\quad\quad\quad} - \underline{\quad\quad\quad} = \underline{\quad\quad\quad}$$

- (8) **Dividing decimals.**

$$3 \overline{) 1.68}$$

$$4 \overline{) 38.08}$$

$$6 \overline{) 35.4}$$

$$7 \overline{) 2.702}$$

Working Space

- (1) Write these number words as a numeral.

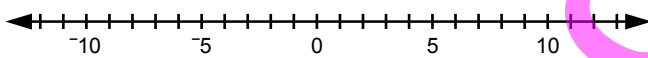
six hundred and two thousand, seven hundred  
and twenty-nine \_\_\_\_\_

- (2) Round these numbers to the nearest 1000.

$6327 = \underline{\hspace{2cm}} \quad 1843 = \underline{\hspace{2cm}}$

$32496 = \underline{\hspace{2cm}} \quad 10985 = \underline{\hspace{2cm}}$

- (3) Add these positive and negative numbers.



$-5 + 9 = \underline{\hspace{2cm}} \quad -8 + 7 = \underline{\hspace{2cm}}$

$13 + -9 = \underline{\hspace{2cm}} \quad 3 + -12 = \underline{\hspace{2cm}}$



- (4) Find the square of these numbers.

Example:  $3^2 = 3 \times 3 = 9$

$6^2 = \underline{\hspace{2cm}} \quad 11^2 = \underline{\hspace{2cm}}$

$3^2 = \underline{\hspace{2cm}} \quad 15^2 = \underline{\hspace{2cm}}$

- (5) Adding decimals.

|                             |        |
|-----------------------------|--------|
|                             | 65.81  |
| 59.36 + 58.9 + 72 = _____   | 0.35   |
| 24.75 + _____ + 69 = 130.45 | 472.07 |
| 54 + 9.4 + _____ = 81.13    | + 3.98 |
|                             | _____  |

- (6) Subtracting decimals.

|                         |        |
|-------------------------|--------|
| 147.1 - _____ = 71.9    | 188.35 |
| _____ - 64.38 = 509.36  | -      |
| 264.17 - _____ = 218.57 | 93.79  |
|                         | _____  |

- (7) Multiplying decimals.

|       |       |       |
|-------|-------|-------|
|       | 4.15  |       |
| 53.8  | 9.72  | x 7.3 |
| x 4   | x 6   | _____ |
| _____ | _____ | _____ |
| _____ | _____ | _____ |

- (8) Dividing large numbers using 'tidy' numbers.

Example:  $195 \div 5 = (200 \div 5) - (5 \div 5) = 20 - 1 = 19$

$232 \div 8 = (\underline{\hspace{1cm}} \div \underline{\hspace{1cm}}) - (\underline{\hspace{1cm}} \div \underline{\hspace{1cm}})$

$= \underline{\hspace{1cm}} - \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$

Working Space

- (1) **Skip counting in 7's, write the number that comes before ...**



\_\_\_\_\_, 56    \_\_\_\_\_, 35    \_\_\_\_\_, 91

Working Space

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

*Example:* In 452 the place value is 10's and it means 50.

2**9**1 = \_\_\_\_\_ = \_\_\_\_\_    2**7**3 = \_\_\_\_\_ = \_\_\_\_\_

6**3**5 = \_\_\_\_\_ = \_\_\_\_\_    **9**41 = \_\_\_\_\_ = \_\_\_\_\_

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

$\frac{1}{2}$  of 36 = \_\_\_\_\_     $\frac{1}{4}$  of 32 = \_\_\_\_\_

$\frac{2}{3}$  of 27 = \_\_\_\_\_     $\frac{2}{5}$  of 60 = \_\_\_\_\_

- (4) Convert these **decimals** to **fractions**.

0.5 = \_\_\_\_\_    0.25 = \_\_\_\_\_    0.8 = \_\_\_\_\_

0.75 = \_\_\_\_\_    0.08 = \_\_\_\_\_    0.36 = \_\_\_\_\_

- (5) **Adding** large numbers.

$$\begin{array}{r} 762 + 4835 + 24 = \underline{\hspace{2cm}} \\ 74 + 232 + 3489 = \underline{\hspace{2cm}} \\ 6941 + 86 + 119 = \underline{\hspace{2cm}} \end{array}$$

437

12980

22

+ 508

- (6) **Subtracting** large numbers.

$$\begin{array}{r} 1472 - 617 = \underline{\hspace{2cm}} \\ 24063 - 802 = \underline{\hspace{2cm}} \\ 75085 - 9626 = \underline{\hspace{2cm}} \end{array}$$

13625

- 945

- (7) **Multiplying** large numbers using place value.

*Example:*  $231 \times 3 = (200 \times 3) + (30 \times 3) + (1 \times 3) = 600 + 90 + 3 = 693$

$$\begin{array}{l} 694 \times 7 = (\underline{\hspace{1cm}} \times \underline{\hspace{1cm}}) + (\underline{\hspace{1cm}} \times \underline{\hspace{1cm}}) + (\underline{\hspace{1cm}} \times \underline{\hspace{1cm}}) \\ = \underline{\hspace{2cm}} + \underline{\hspace{2cm}} + \underline{\hspace{2cm}} = \underline{\hspace{2cm}} \end{array}$$

- (8) **Dividing** large numbers, some with remainders.

$$6 \overline{) 414}$$

$$8 \overline{) 4992}$$

$$7 \overline{) 623}$$

$$9 \overline{) 4839}$$



- (1) List the
- factors**
- of these numbers.

$$10 = \underline{\hspace{2cm}} \quad 15 = \underline{\hspace{2cm}}$$

$$24 = \underline{\hspace{2cm}}$$

- (2)
- Round**
- these numbers to the
- nearest 10**
- or
- 100**
- and then work out an
- estimated answer**
- .

$$356 + 210 + 95 = \underline{\hspace{1cm}} + \underline{\hspace{1cm}} + \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$$

$$4867 - 708 = \underline{\hspace{1cm}} - \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$$

- (3)
- Convert**
- these
- improper fractions**
- to
- mixed numbers**
- .
- Example:  $\frac{11}{4} = 2\frac{3}{4}$*

$$\frac{15}{4} = \underline{\hspace{1cm}} \quad \frac{23}{7} = \underline{\hspace{1cm}}$$

$$\frac{34}{6} = \underline{\hspace{1cm}} \quad \frac{41}{9} = \underline{\hspace{1cm}}$$



- (4)
- Convert**
- these
- fractions**
- to
- decimals**
- .

$$\frac{1}{2} = \underline{\hspace{1cm}} \quad \frac{1}{4} = \underline{\hspace{1cm}} \quad \frac{2}{3} = \underline{\hspace{1cm}}$$

$$\frac{2}{5} = \underline{\hspace{1cm}} \quad \frac{1}{20} = \underline{\hspace{1cm}} \quad \frac{37}{100} = \underline{\hspace{1cm}}$$

- (5)
- Adding**
- large numbers.

$$613 + 4690 + 79 = \underline{\hspace{1cm}} \quad \begin{array}{r} 541 \\ 3949 \end{array}$$

$$71 + \underline{\hspace{1cm}} + 3176 = 3901 \quad \begin{array}{r} 73 \\ + 260 \end{array}$$

$$2358 + 89 + \underline{\hspace{1cm}} = 3049 \quad \underline{\hspace{1cm}}$$

- (6)
- Subtracting**
- large numbers.

$$7238 - \underline{\hspace{1cm}} = 7153 \quad \begin{array}{r} 3958 \\ - \end{array}$$

$$\underline{\hspace{1cm}} - 649 = 3263 \quad \underline{\hspace{1cm}}$$

$$11090 - \underline{\hspace{1cm}} = 8127 \quad \begin{array}{r} 3799 \\ - \end{array}$$

- (7)
- Multiplying**
- whole numbers.

$$\begin{array}{r} 193 \\ \times 8 \end{array} \quad \begin{array}{r} 257 \\ \times 9 \end{array} \quad \begin{array}{r} 742 \\ \times 76 \end{array}$$

$$\underline{\hspace{1cm}} \quad \underline{\hspace{1cm}} \quad \underline{\hspace{1cm}}$$

- (8)
- Dividing**
- large numbers using multiples of 10.

*Example:  $145 \div 5 = (100 \div 5) + (45 \div 5) = 20 + 9 = 29$*

$$945 \div 9 = (\underline{\hspace{1cm}} \div \underline{\hspace{1cm}}) + (\underline{\hspace{1cm}} \div \underline{\hspace{1cm}})$$

$$= \underline{\hspace{1cm}} + \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$$

Working Space

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



48 \_\_\_\_\_ 60, 90 \_\_\_\_\_ 102, 24 \_\_\_\_\_ 36

- (2) **Round these numbers to the nearest 10th.**

2.43 = \_\_\_\_\_ 3.74 = \_\_\_\_\_

37.86 = \_\_\_\_\_ 60.15 = \_\_\_\_\_

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

*Example:* In 4.**5**2 the place value is  $\frac{1}{10}$ 's and it means  $\frac{5}{10}$ .

**3.46** = \_\_\_\_\_ = \_\_\_\_\_ **7.82** = \_\_\_\_\_ = \_\_\_\_\_

**12.58** = \_\_\_\_\_ = \_\_\_\_\_ **39.31** = \_\_\_\_\_ = \_\_\_\_\_

- (4) **Find the square root of these numbers.**

*Example:*  $\sqrt{9} = 3$  as  $3 \times 3 = 9$

$\sqrt{81} =$  \_\_\_\_\_  $\sqrt{16} =$  \_\_\_\_\_

$\sqrt{64} =$  \_\_\_\_\_  $\sqrt{144} =$  \_\_\_\_\_

- (5) **Adding decimals.**

0.15

$93.09 + 6.3 + 280.8 =$  \_\_\_\_\_  $368.25$

$2.31 + 382.74 + 69.9 =$  \_\_\_\_\_  $0.57$

$5.205 + 6.78 + 14.67 =$  \_\_\_\_\_  $+ 17.80$

- (6) **Subtracting decimals.**

$301.8 - 47.4 =$  \_\_\_\_\_  $584.06$

$358.70 - 77.32 =$  \_\_\_\_\_  $- 37.85$

$1526.73 - 354.8 =$  \_\_\_\_\_

- (7) **Multiplying large numbers using 'tidy' numbers.**

*Example:*  $296 \times 3 = (300 \times 3) - (4 \times 3) = 900 - 12 = 888$

$588 \times 6 = (\underline{\quad} \times \underline{\quad}) - (\underline{\quad} \times \underline{\quad})$

$= \underline{\quad} - \underline{\quad} = \underline{\quad}$

- (8) **Dividing decimals.**

$6 \overline{) 3.84}$

$7 \overline{) 1.736}$

$8 \overline{) 49.6}$

$9 \overline{) 37.53}$

Working Space

- (1) Write these number words as **decimal numerals**.



nine point three zero seven \_\_\_\_\_

forty-five point two eight three \_\_\_\_\_

- (2) Write two larger equivalent fractions.

$$\frac{2}{3} = \frac{\quad}{\quad} = \frac{\quad}{\quad} \quad \frac{2}{5} = \frac{\quad}{\quad} = \frac{\quad}{\quad}$$

- (3) Round these numbers to the **nearest 100th**.

$$0.138 = \underline{\quad\quad\quad} \quad 7.145 = \underline{\quad\quad\quad}$$

$$50.342 = \underline{\quad\quad\quad} \quad 23.0129 = \underline{\quad\quad\quad}$$

- (4) Convert these fractions to **percentages**.

$$\frac{1}{2} = \underline{\quad\quad\quad} \quad \frac{1}{4} = \underline{\quad\quad\quad} \quad \frac{2}{5} = \underline{\quad\quad\quad}$$

$$\frac{2}{3} = \underline{\quad\quad\quad} \quad \frac{1}{25} = \underline{\quad\quad\quad} \quad \frac{5}{8} = \underline{\quad\quad\quad}$$

- (5) **Adding** decimals.

$$\begin{array}{r} 367.1 + 2.54 + 82.6 = \underline{\quad\quad\quad} \\ 82.14 + \underline{\quad\quad\quad} + 9.35 = 675.09 \\ 168.6 + 44.59 + \underline{\quad\quad\quad} = 233.47 \end{array}$$

1.80

3.51

48.47

+ 0.93

- (6) **Subtracting** decimals.

$$\begin{array}{r} 357.8 - \underline{\quad\quad\quad} = 284.9 \\ \underline{\quad\quad\quad} - 487.2 = 279.67 \\ 2916.7 - \underline{\quad\quad\quad} = 2566.91 \end{array}$$

738.5

-

678.9

- (7) **Multiplying** decimals.

$$\begin{array}{r} 35.8 \quad 1.94 \quad 53.8 \\ \times 5 \quad \times 8 \quad \times 4.9 \\ \hline \end{array}$$

- (8) **Dividing** large numbers using 'tidy' numbers.

Example:  $195 \div 5 = (200 \div 5) - (5 \div 5) = 20 - 1 = 19$

$$873 \div 9 = (\underline{\quad\quad} \div \underline{\quad\quad}) - (\underline{\quad\quad} \div \underline{\quad\quad})$$

$$= \underline{\quad\quad} - \underline{\quad\quad} = \underline{\quad\quad}$$

Working Space

- (1) Skip counting in 7's, write the number that comes after ...



49, \_\_\_\_\_ 77, \_\_\_\_\_ 28, \_\_\_\_\_

- (2) Round these numbers to the nearest 10th and then work out an estimated answer.

$$12.19 + 5.83 = \underline{\hspace{2cm}} + \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

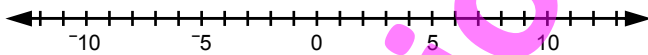
$$14.84 - 9.07 = \underline{\hspace{2cm}} - \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

- (3) Find each fraction of these decimals.

$$\frac{1}{3} \text{ of } 27 = \underline{\hspace{2cm}} \quad \frac{3}{4} \text{ of } 36 = \underline{\hspace{2cm}}$$

$$\frac{5}{8} \text{ of } 40 = \underline{\hspace{2cm}} \quad \frac{4}{7} \text{ of } 49 = \underline{\hspace{2cm}}$$

- (4) Add these positive and negative numbers.



$$-7 + 12 = \underline{\hspace{2cm}} \quad -5 + 5 = \underline{\hspace{2cm}}$$

$$11 + -12 = \underline{\hspace{2cm}} \quad 9 + -12 = \underline{\hspace{2cm}}$$

- (5) Adding large numbers.

$$\begin{array}{r} 157 + 1349 + 23 = \underline{\hspace{2cm}} \\ 90 + 748 + 2935 = \underline{\hspace{2cm}} \\ 1376 + 20 + 398 = \underline{\hspace{2cm}} \end{array} \quad \begin{array}{r} 370 \\ 67 \\ 2585 \\ + 915 \\ \hline \end{array}$$

- (6) Subtracting large numbers.

$$\begin{array}{r} 4026 - 376 = \underline{\hspace{2cm}} \\ 5802 - 816 = \underline{\hspace{2cm}} \\ 10393 - 937 = \underline{\hspace{2cm}} \end{array} \quad \begin{array}{r} 42000 \\ - 975 \\ \hline \end{array}$$

- (7) Multiplying large numbers using place value.

Example:  $231 \times 3 = (200 \times 3) + (30 \times 3) + (1 \times 3) = 600 + 90 + 3 = 693$

$$\begin{aligned} 645 \times 7 &= (\underline{\hspace{1cm}} \times \underline{\hspace{1cm}}) + (\underline{\hspace{1cm}} \times \underline{\hspace{1cm}}) + (\underline{\hspace{1cm}} \times \underline{\hspace{1cm}}) \\ &= \underline{\hspace{2cm}} + \underline{\hspace{2cm}} + \underline{\hspace{2cm}} = \underline{\hspace{2cm}} \end{aligned}$$

- (8) Dividing large numbers.

$$\begin{array}{r} 9 \overline{) 441} \\ 8 \overline{) 520} \end{array} \quad \begin{array}{r} 6 \overline{) 3228} \\ 7 \overline{) 4473} \end{array}$$

Working Space

- (1) Write these decimals as number words.

2.307  
\_\_\_\_\_0.069  
\_\_\_\_\_

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

*Example:* In 4.52 the place value is  $\frac{1}{10}$ 's and it means  $\frac{5}{10}$ .

2.97 = \_\_\_\_\_ = \_\_\_\_\_    3.48 = \_\_\_\_\_ = \_\_\_\_\_

16.39 = \_\_\_\_\_ = \_\_\_\_\_    94.67 = \_\_\_\_\_ = \_\_\_\_\_

- (3) Convert these mixed numbers to improper fractions.
- Example:*
- $4\frac{2}{3} = \frac{14}{3}$

 $3\frac{1}{5} =$  \_\_\_\_\_ $7\frac{3}{4} =$  \_\_\_\_\_ $6\frac{2}{3} =$  \_\_\_\_\_ $4\frac{3}{8} =$  \_\_\_\_\_

- (4) Convert these percentages to fractions.

50% = \_\_\_\_\_    40% = \_\_\_\_\_    75% = \_\_\_\_\_

47% = \_\_\_\_\_    64% = \_\_\_\_\_    6% = \_\_\_\_\_

- (5) Adding large numbers.

482 + 1312 + 54 = \_\_\_\_\_

67 + \_\_\_\_\_ + 1398 = 1672

2382 + 45 + \_\_\_\_\_ = 2613

158

3564

27

+ 318

- (6) Subtracting large numbers.

2986 - \_\_\_\_\_ = 2302

\_\_\_\_\_ - 358 = 4419

5633 - \_\_\_\_\_ = 3298

3637

-

2241

- (7) Multiplying whole numbers.

269

x 4

326

x 9

853

x 67

- (8) Dividing large numbers using multiples of 10.

*Example:*  $145 \div 5 = (100 \div 5) + (45 \div 5) = 20 + 9 = 29$  $1648 \div 8 = (\text{_____} \div \text{_____}) + (\text{_____} \div \text{_____})$  $= \text{_____} + \text{_____} = \text{_____}$ 

Working Space



(1) Solve these equations.

$4d + 13 = 49 \quad d = \underline{\hspace{2cm}}$

$7k - 19 = 37 \quad k = \underline{\hspace{2cm}}$

(2) Round these numbers to the nearest 10.

$362 = \underline{\hspace{2cm}} \quad 257 = \underline{\hspace{2cm}}$

$1846 = \underline{\hspace{2cm}} \quad 2395 = \underline{\hspace{2cm}}$

(3) Find the square of these numbers.

$7^2 = \underline{\hspace{2cm}} \quad 9^2 = \underline{\hspace{2cm}}$

$12^2 = \underline{\hspace{2cm}} \quad 20^2 = \underline{\hspace{2cm}}$

(4) Convert these percentages to decimals.

$25\% = \underline{\hspace{2cm}} \quad 30\% = \underline{\hspace{2cm}} \quad 97\% = \underline{\hspace{2cm}}$

$124\% = \underline{\hspace{2cm}} \quad 4\% = \underline{\hspace{2cm}} \quad 0.5\% = \underline{\hspace{2cm}}$

(5) Adding decimals.

$$\begin{array}{r}
 56.84 + 530.23 + 9.7 = \underline{\hspace{2cm}} \\
 274.19 + 6.2 + 93.58 = \underline{\hspace{2cm}} \\
 8.7 + 39.6 + 624.1 = \underline{\hspace{2cm}}
 \end{array}$$

9.5

4133.5

71.5

+ 621.1

(6) Subtracting decimals.

$$\begin{array}{r}
 148.45 - 5.27 = \underline{\hspace{2cm}} \\
 64.782 - 1.36 = \underline{\hspace{2cm}} \\
 931.0 - 463.23 = \underline{\hspace{2cm}}
 \end{array}$$

148.83

- 75.96

(7) Multiplying large numbers using 'tidy' numbers.

Example:  $296 \times 3 = (300 \times 3) - (4 \times 3) = 900 - 12 = 888$ 

$$\begin{array}{l}
 593 \times 8 = (\underline{\hspace{1cm}} \times \underline{\hspace{1cm}}) - (\underline{\hspace{1cm}} \times \underline{\hspace{1cm}}) \\
 = \underline{\hspace{2cm}} - \underline{\hspace{2cm}} = \underline{\hspace{2cm}}
 \end{array}$$

(8) Dividing decimals.

$4 \overline{) 2.92}$

$7 \overline{) 37.03}$

$9 \overline{) 72.9}$

$8 \overline{) 383.2}$

Working Space

- (1) Write these numbers in order from **smallest** to **largest**.



3.28  
0.329  
32.4  
0.0321  
326

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

Working Space

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

$$4.13 = \underline{\hspace{1cm}} = \underline{\hspace{1cm}} \quad 6.27 = \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$$

$$13.48 = \underline{\hspace{1cm}} = \underline{\hspace{1cm}} \quad 31.94 = \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$$

- (3) Convert these percentages to fractions.

$$40\% = \underline{\hspace{1cm}} \quad 66\frac{2}{3}\% = \underline{\hspace{1cm}} \quad 5\% = \underline{\hspace{1cm}}$$

$$17\% = \underline{\hspace{1cm}} \quad 75\% = \underline{\hspace{1cm}} \quad 125\% = \underline{\hspace{1cm}}$$

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

$$632 = \underline{\hspace{1cm}} \quad 850 = \underline{\hspace{1cm}}$$

$$1794 = \underline{\hspace{1cm}} \quad 1469 = \underline{\hspace{1cm}}$$

- (5) Adding decimals.

$$13.6 + 324.2 + 7.65 = \underline{\hspace{1cm}} \quad 331.8$$

$$142.7 + \underline{\hspace{1cm}} + 4.55 = 157.67 \quad 52.7$$

$$9.39 + 46.8 + \underline{\hspace{1cm}} = 302.54 \quad \begin{array}{r} 5120.9 \\ + 47.9 \end{array}$$

- (6) Subtracting decimals.

$$259.34 - \underline{\hspace{1cm}} = 187.84 \quad 397.13$$

$$\underline{\hspace{1cm}} - 21.53 = 436.27 \quad -$$

$$1788.3 - \underline{\hspace{1cm}} = 162.87 \quad 342.49$$

- (7) Multiplying decimals.

$$\begin{array}{r} 67.3 \\ \times 5 \\ \hline \end{array} \quad \begin{array}{r} 3.90 \\ \times 8 \\ \hline \end{array} \quad \begin{array}{r} 74.1 \\ \times 6.9 \\ \hline \end{array}$$

- (8) Dividing large numbers using 'tidy' numbers.

Example:  $195 \div 5 = (200 \div 5) - (5 \div 5) = 20 - 1 = 19$

$$665 \div 7 = (\underline{\hspace{1cm}} \div \underline{\hspace{1cm}}) - (\underline{\hspace{1cm}} \div \underline{\hspace{1cm}})$$

$$= \underline{\hspace{1cm}} - \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$$

- (1) **Skip counting in 9's, write the number that comes after ...**



81, \_\_\_\_\_ 45, \_\_\_\_\_ 108, \_\_\_\_\_

Working Space

- (2) **Round these numbers to the nearest 10 or 100 and then work out an estimated answer.**

$$78 + 194 + 34 = \underline{\quad} + \underline{\quad} + \underline{\quad} = \underline{\quad}$$

$$6345 - 287 = \underline{\quad} - \underline{\quad} = \underline{\quad}$$

- (3) **Find each fraction of these decimals.**

$$\frac{1}{7} \text{ of } 5.6 = \underline{\quad} \quad \frac{2}{5} \text{ of } 23.5 = \underline{\quad}$$

$$\frac{2}{3} \text{ of } 12.9 = \underline{\quad} \quad \frac{7}{8} \text{ of } 25.6 = \underline{\quad}$$

- (4) **Convert these decimals to percentages.**

$$0.25 = \underline{\quad} \quad 0.9 = \underline{\quad} \quad 0.65 = \underline{\quad}$$

$$0.004 = \underline{\quad} \quad 0.08 = \underline{\quad} \quad 2.75 = \underline{\quad}$$

- (5) **Adding large numbers.**

$$\begin{array}{r} 1943 + 32 + 751 = \underline{\quad} \\ 847 + 5390 + 29 = \underline{\quad} \\ 89 + 302 + 6731 = \underline{\quad} \end{array} \quad \begin{array}{r} 5852 \\ 770 \\ 36 \\ + 519 \\ \hline \end{array}$$

- (6) **Subtracting large numbers.**

$$\begin{array}{r} 4620 - 673 = \underline{\quad} \\ 7208 - 618 = \underline{\quad} \\ 12393 - 739 = \underline{\quad} \end{array} \quad \begin{array}{r} 27000 \\ - 579 \\ \hline \end{array}$$

- (7) **Multiplying large numbers using place value.**

Example:  $231 \times 3 = (200 \times 3) + (30 \times 3) + (1 \times 3) = 600 + 90 + 3 = 693$

$$\begin{array}{l} 276 \times 9 = (\underline{\quad} \times \underline{\quad}) + (\underline{\quad} \times \underline{\quad}) + (\underline{\quad} \times \underline{\quad}) \\ = \underline{\quad} + \underline{\quad} + \underline{\quad} = \underline{\quad} \end{array}$$

- (8) **Dividing large numbers with remainders.**

$$\begin{array}{r} 3 \overline{) 427} \\ 5 \overline{) 684} \end{array} \quad \begin{array}{r} 6 \overline{) 2398} \\ 8 \overline{) 9207} \end{array}$$

(1) **Order of operations.****BEDMAS**

Working Space

$9 + 32 \div 4 = \underline{\hspace{2cm}}$

$82 - 7 \times 9 = \underline{\hspace{2cm}}$

$2 \times 7 + 3^2 = \underline{\hspace{2cm}}$

$3(8 + 4 \times 3) = \underline{\hspace{2cm}}$

(2) **Round these numbers to the nearest 1000.**

$2530 = \underline{\hspace{2cm}}$

$9190 = \underline{\hspace{2cm}}$

$12499 = \underline{\hspace{2cm}}$

$23710 = \underline{\hspace{2cm}}$

(3) **Find the percentage of these numbers.**

$50\% \text{ of } 84 = \underline{\hspace{2cm}}$

$25\% \text{ of } 52 = \underline{\hspace{2cm}}$

$10\% \text{ of } 96 = \underline{\hspace{2cm}}$

$40\% \text{ of } 70 = \underline{\hspace{2cm}}$

(4) **Find the square root of these numbers.***Example:  $\sqrt{9} = 3$  as  $3 \times 3 = 9$* 

$\sqrt{25} = \underline{\hspace{2cm}}$

$\sqrt{49} = \underline{\hspace{2cm}}$

$\sqrt{121} = \underline{\hspace{2cm}}$

$\sqrt{400} = \underline{\hspace{2cm}}$

(5) **Adding large numbers.**

$$\begin{array}{r} 45 + 3421 + 284 = \underline{\hspace{2cm}} \\ \phantom{45 +} 4653 \end{array}$$

$$\begin{array}{r} 1893 + \underline{\hspace{2cm}} + 76 = 2127 \\ \phantom{1893 +} 72 \end{array}$$

$$\begin{array}{r} 283 + 54 + \underline{\hspace{2cm}} = 3162 \\ \phantom{283 + 54 +} 913 \end{array}$$

(6) **Subtracting large numbers.**

$$\begin{array}{r} 6892 - \underline{\hspace{2cm}} = 2032 \\ \phantom{6892 -} 6347 \end{array}$$

$$\begin{array}{r} \underline{\hspace{2cm}} - 853 = 9144 \\ \phantom{\underline{\hspace{2cm}} -} - \end{array}$$

$$\begin{array}{r} 7336 - \underline{\hspace{2cm}} = 2389 \\ \phantom{7336 -} 1422 \end{array}$$

(7) **Multiplying whole numbers.**

$$\begin{array}{r} 982 \phantom{00} \phantom{00} \phantom{00} \phantom{00} \phantom{00} \phantom{00} \\ \times 4 \phantom{00} \phantom{00} \phantom{00} \phantom{00} \phantom{00} \phantom{00} \\ \hline \end{array}$$

$$\begin{array}{r} 745 \phantom{00} \phantom{00} \phantom{00} \phantom{00} \phantom{00} \phantom{00} \\ \times 6 \phantom{00} \phantom{00} \phantom{00} \phantom{00} \phantom{00} \phantom{00} \\ \hline \end{array}$$

$$\begin{array}{r} 806 \\ \times 37 \\ \hline \end{array}$$

(8) **Dividing large numbers using multiples of 10.***Example:  $145 \div 5 = (100 \div 5) + (45 \div 5) = 20 + 9 = 29$* 

$963 \div 9 = (\underline{\hspace{1cm}} \div \underline{\hspace{1cm}}) + (\underline{\hspace{1cm}} \div \underline{\hspace{1cm}})$

$= \underline{\hspace{1cm}} + \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$

- (1) Skip counting in 8's, write the number that comes before ...



\_\_\_\_\_, 48      \_\_\_\_\_, 120      \_\_\_\_\_, 88

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

29.34 = \_\_\_\_\_ = \_\_\_\_\_      **3**59 = \_\_\_\_\_ = \_\_\_\_\_

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

- (3) Find the percentage of these decimals.

33 $\frac{1}{3}$ % of 12.6 = \_\_\_\_\_      20% of 9.5 = \_\_\_\_\_

25% of 0.48 = \_\_\_\_\_      80% of 20.5 = \_\_\_\_\_

- (4) Convert these decimals to fractions.

0.6 = \_\_\_\_\_      0.17 = \_\_\_\_\_      0.33 = \_\_\_\_\_

0.08 = \_\_\_\_\_      3.75 = \_\_\_\_\_      0.005 = \_\_\_\_\_

- (5) Adding decimals.

|                              |         |
|------------------------------|---------|
| 7.9 + 65.48 + 305.32 = _____ | 53.31   |
|                              | 5.90    |
| 39.85 + 247.91 + 2.6 = _____ | 533.14  |
|                              | + 12.16 |
| 142.6 + 7.8 + 69.3 = _____   | _____   |

- (6) Subtracting decimals.

548.41 - 9.25 = \_\_\_\_\_      3884.1

82.746 - 6.31 = \_\_\_\_\_      - 695.7

785.00 - 323.64 = \_\_\_\_\_      \_\_\_\_\_

- (7) Multiplying large numbers using 'tidy' numbers.

Example:  $304 \times 3 = (300 \times 3) + (4 \times 3) = 900 + 12 = 912$

$709 \times 6 = (\underline{\quad} \times \underline{\quad}) + (\underline{\quad} \times \underline{\quad})$

$= \underline{\quad} + \underline{\quad} = \underline{\quad}$

- (8) Dividing decimals.

$4 \overline{) 3.44}$

$7 \overline{) 24.22}$

$5 \overline{) 78.5}$

$9 \overline{) 6.048}$

Working Space



- (1) Round these numbers to the nearest 10 or 100 and then work out an estimated answer.

$$256 + 107 + 86 = \underline{\quad} + \underline{\quad} + \underline{\quad} = \underline{\quad}$$

$$6810 - 516 = \underline{\quad} - \underline{\quad} = \underline{\quad}$$

- (2) Multiplying by 10, 100 or 1000.

$$56 \times 10 = \underline{\quad} \quad 2.34 \times 1000 = \underline{\quad}$$

$$0.34 \times 1000 = \underline{\quad} \quad 136 \times 100 = \underline{\quad}$$

- (3) Convert these improper fractions to mixed numbers. Example:  $\frac{11}{4} = 2\frac{3}{4}$

$$\frac{19}{5} = \underline{\quad}$$

$$\frac{37}{8} = \underline{\quad}$$

$$\frac{27}{6} = \underline{\quad}$$

$$\frac{48}{9} = \underline{\quad}$$



- (4) A group of 6 pupils from Room 8 went on a bus ride to the zoo. If this group makes up  $\frac{1}{5}$  of the Room 8 pupils, how many pupils are there in Room 8?



- (5) Adding decimals.

$$\begin{array}{r} 31.6 + 342.2 + 6.75 = \underline{\quad} \\ 417.2 + \underline{\quad} + 5.45 = 721.76 \\ 3.93 + 64.8 + \underline{\quad} = 203.45 \end{array}$$

31.8

5152.7

7.5

+ 347.9

- (6) Subtracting decimals.

$$\begin{array}{r} 925.43 - \underline{\quad} = 781.48 \\ \underline{\quad} - 35.12 = 634.92 \\ 1298.3 - \underline{\quad} = 526.78 \end{array}$$

739.13

-

234.49

- (7) Multiplying decimals.

$$\begin{array}{r} 6.78 \\ \times 5 \\ \hline \end{array} \quad \begin{array}{r} 43.6 \\ \times 8 \\ \hline \end{array} \quad \begin{array}{r} 5.74 \\ \times 9.2 \\ \hline \end{array}$$

- (8) Dividing large numbers using 'tidy' numbers.

Example:  $195 \div 5 = (200 \div 5) - (5 \div 5) = 20 - 1 = 19$

$$873 \div 9 = (\underline{\quad} \div \underline{\quad}) - (\underline{\quad} \div \underline{\quad})$$

$$= \underline{\quad} - \underline{\quad} = \underline{\quad}$$

Working Space

- (1) Skip counting in 9's, write the number that is **between** ...



$$36 \text{ \_\_\_\_ } 54, \quad 72 \text{ \_\_\_\_ } 90, \quad 108 \text{ \_\_\_\_ } 126$$

- (2) Round these numbers to the **nearest 10th**.

$$60.92 = \text{ \_\_\_\_\_\_\_\_\_\_\_\_ } \quad 5.374 = \text{ \_\_\_\_\_\_\_\_\_\_\_\_ }$$

$$9.765 = \text{ \_\_\_\_\_\_\_\_\_\_\_\_ } \quad 78.049 = \text{ \_\_\_\_\_\_\_\_\_\_\_\_ }$$

- (3) Solve these **equations**, with mixed number answers.



$$7d + 21 = 32 \quad d = \text{ \_\_\_\_\_\_\_\_\_\_\_\_ }$$

$$8k - 14 = 59 \quad k = \text{ \_\_\_\_\_\_\_\_\_\_\_\_ }$$

- (4) Convert these **fractions to decimals**.

$$\frac{1}{2} = \text{ \_\_\_\_\_\_ } \quad \frac{2}{5} = \text{ \_\_\_\_\_\_ } \quad \frac{2}{3} = \text{ \_\_\_\_\_\_ }$$

$$\frac{3}{4} = \text{ \_\_\_\_\_\_ } \quad \frac{7}{10} = \text{ \_\_\_\_\_\_ } \quad \frac{3}{100} = \text{ \_\_\_\_\_\_ }$$

- (5) **Adding** large numbers.

$$\begin{array}{r} 3418 \\ 9304 + 406 + 83 = \text{ \_\_\_\_\_\_\_\_\_\_\_\_ } \\ 494 + 54 + 2387 = \text{ \_\_\_\_\_\_\_\_\_\_\_\_ } \\ 59 + 4186 + 943 = \text{ \_\_\_\_\_\_\_\_\_\_\_\_ } \end{array}$$

- (6) **Subtracting** large numbers.

$$\begin{array}{r} 3162 - 294 = \text{ \_\_\_\_\_\_\_\_\_\_\_\_ } \\ 57827 - 8584 = \text{ \_\_\_\_\_\_\_\_\_\_\_\_ } \\ 29862 - 439 = \text{ \_\_\_\_\_\_\_\_\_\_\_\_ } \end{array}$$

- (7) **Multiplying** large numbers using place value.

Example:  $231 \times 3 = (200 \times 3) + (30 \times 3) + (1 \times 3) = 600 + 90 + 3 = 693$

$$409 \times 8 = (\text{ \_\_\_\_\_\_ } \times \text{ \_\_\_\_\_\_ }) + (\text{ \_\_\_\_\_\_ } \times \text{ \_\_\_\_\_\_ }) + (\text{ \_\_\_\_\_\_ } \times \text{ \_\_\_\_\_\_ })$$

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

- (8) **Dividing** large numbers with remainders.

$$\begin{array}{r} 6 \overline{) 592} \\ 4 \overline{) 791} \end{array} \quad \begin{array}{r} 7 \overline{) 2398} \\ 9 \overline{) 4607} \end{array}$$

Working Space

- (1) Write these number words as **decimal numerals**.



one hundred point two zero eight \_\_\_\_\_

sixty-seven point zero zero nine five \_\_\_\_\_

- (2) Write two **equivalent fractions**.

$$\frac{3}{5} = \frac{\quad}{\quad} = \frac{\quad}{\quad} \quad \frac{2}{7} = \frac{\quad}{\quad} = \frac{\quad}{\quad}$$

- (3) Round these numbers to the **nearest 100th**.

$$0.056 = \underline{\quad\quad\quad} \quad 3.961 = \underline{\quad\quad\quad}$$

$$45.009 = \underline{\quad\quad\quad} \quad 2.3419 = \underline{\quad\quad\quad}$$

- (4) Complete these ratios.

Example: The ratio 3:4 is the same as 6:8.



$$2:3 = \underline{\quad\quad} : 12 \quad 5: \underline{\quad\quad} = 20:16$$

$$\underline{\quad\quad} : 32 = 1:8 \quad 24:18 = 4 : \underline{\quad\quad}$$

- (5) Adding large numbers.

$$\begin{array}{r} 5936 + 589 + \underline{\quad\quad\quad} = 6597 \\ 2475 + \underline{\quad\quad\quad} + 769 = 6045 \\ 54 + 2394 + \underline{\quad\quad\quad} = 3213 \end{array}$$

6581

35

47207

+ 398

- (6) Subtracting large numbers.

$$\begin{array}{r} 1473 - \underline{\quad\quad\quad} = 719 \\ \underline{\quad\quad\quad} - 6438 = 50936 \\ 26417 - \underline{\quad\quad\quad} = 21857 \end{array}$$

18835

-

9379

- (7) Multiplying whole numbers.

$$\begin{array}{r} 238 \quad 517 \\ \times 8 \quad \times 9 \\ \hline \end{array}$$

6051

x 27

- (8) Dividing large numbers using multiples of 10.

Example:  $145 \div 5 = (100 \div 5) + (45 \div 5) = 20 + 9 = 29$

$$424 \div 8 = (\underline{\quad\quad} \div \underline{\quad\quad}) + (\underline{\quad\quad} \div \underline{\quad\quad})$$

$$= \underline{\quad\quad} + \underline{\quad\quad} = \underline{\quad\quad}$$

Working Space

- (1) **Skip counting in 9's, write the number that comes after ...**



81, \_\_\_\_\_ 45, \_\_\_\_\_ 108, \_\_\_\_\_

- (2) **Round these numbers to the nearest 10th and then work out an estimated answer.**

$$40.29 + 8.73 = \underline{\quad\quad\quad} + \underline{\quad\quad\quad} = \underline{\quad\quad\quad}$$

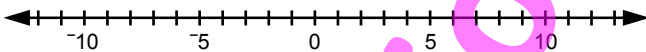
$$32.54 - 7.25 = \underline{\quad\quad\quad} - \underline{\quad\quad\quad} = \underline{\quad\quad\quad}$$

- (3) **Dividing by 10, 100 or 1000.**

$$265 \div 10 = \underline{\quad\quad\quad} \quad 736 \div 100 = \underline{\quad\quad\quad}$$

$$3.48 \div 100 = \underline{\quad\quad\quad} \quad 412 \div 1000 = \underline{\quad\quad\quad}$$

- (4) **Add these positive and negative numbers.**



$$-9 + 8 = \underline{\quad\quad\quad} \quad -7 + 12 = \underline{\quad\quad\quad}$$

$$8 + -11 = \underline{\quad\quad\quad} \quad -4 + -3 = \underline{\quad\quad\quad}$$



- (5) **Adding decimals.**

$$\begin{array}{r}
 462.52 \\
 144.3 + 7.32 + 1.3 = \underline{\quad\quad\quad} \\
 4.71 + 26 + 853.4 = \underline{\quad\quad\quad} \\
 7.2 + 94.4 + 4.124 = \underline{\quad\quad\quad}
 \end{array}$$

462.52

0.63

3109.36

+ 45.12

- (6) **Subtracting decimals.**

$$\begin{array}{r}
 129.8 - 5.3 = \underline{\quad\quad\quad} \\
 134.27 - 96.5 = \underline{\quad\quad\quad} \\
 2738.5 - 36.21 = \underline{\quad\quad\quad}
 \end{array}$$

564.7

- 48.2

- (7) **Multiplying large numbers using 'tidy' numbers.**

Example:  $296 \times 3 = (300 \times 3) - (4 \times 3) = 900 - 12 = 888$

$$\begin{array}{l}
 855 \times 9 = (\underline{\quad\quad} \times \underline{\quad\quad}) - (\underline{\quad\quad} \times \underline{\quad\quad}) \\
 = \underline{\quad\quad\quad} - \underline{\quad\quad\quad} = \underline{\quad\quad\quad}
 \end{array}$$

- (8) **Dividing decimals with remainders.**

$$5 \overline{) 6.48}$$

$$6 \overline{) 96.14}$$

$$3 \overline{) 87.5}$$

$$8 \overline{) 7.493}$$

Working Space

- (1) Write these decimals as number words.

1.023  
\_\_\_\_\_40.961  
\_\_\_\_\_

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

**1.76** = \_\_\_\_\_ = \_\_\_\_\_    **7.28** = \_\_\_\_\_ = \_\_\_\_\_**151.9** = \_\_\_\_\_ = \_\_\_\_\_    **19.34** = \_\_\_\_\_ = \_\_\_\_\_

- (3) Convert these mixed numbers to improper fractions. Example:
- $4\frac{2}{3} = \frac{14}{3}$

 $3\frac{7}{8} =$  \_\_\_\_\_ $4\frac{4}{9} =$  \_\_\_\_\_ $5\frac{4}{5} =$  \_\_\_\_\_ $6\frac{2}{11} =$  \_\_\_\_\_

- (4) Convert these fractions to percentages.

 $\frac{1}{4} =$  \_\_\_\_\_     $\frac{1}{3} =$  \_\_\_\_\_     $\frac{4}{5} =$  \_\_\_\_\_ $\frac{7}{8} =$  \_\_\_\_\_     $\frac{1}{20} =$  \_\_\_\_\_     $\frac{3}{100} =$  \_\_\_\_\_

- (5) Adding decimals.

|                     |                |
|---------------------|----------------|
|                     | 167.5          |
| $46.2 + 41 +$ _____ | $= 89.983$     |
| $5.53 +$ _____      | $+ 47 = 314.2$ |
| $41 + 9.27 +$ _____ | $= 176.0$      |

- (6) Subtracting decimals.

|                  |                  |
|------------------|------------------|
| $32.86 -$ _____  | $= 2.516$        |
| _____            | $- 26.08 = 97.4$ |
| $2157.3 -$ _____ | $= 19.706$       |

- (7) Multiplying decimals.

|              |              |
|--------------|--------------|
|              | 0.589        |
| $4.89$       | $23.7$       |
| $\times 0.5$ | $\times 4.8$ |
| _____        | _____        |
| _____        | _____        |

- (8) Dividing large numbers using 'tidy' numbers.

Example:  $195 \div 5 = (200 \div 5) - (5 \div 5) = 20 - 1 = 19$ 

$$232 \div 8 = (\text{_____} \div \text{_____}) - (\text{_____} \div \text{_____})$$

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

Working Space



- (1)
- Multiplying**
- by 10, 100 or 1000.

$562 \times 10 = \underline{\hspace{2cm}}$        $1.2 \times 1000 = \underline{\hspace{2cm}}$

$3.4 \times 1000 = \underline{\hspace{2cm}}$        $0.79 \times 100 = \underline{\hspace{2cm}}$

- (2)
- Round**
- these numbers to the
- nearest 10**
- or
- 100**
- and then work out an
- estimated answer**
- .

$231 + 89 + 412 = \underline{\hspace{1cm}} + \underline{\hspace{1cm}} + \underline{\hspace{1cm}} = \underline{\hspace{2cm}}$

$6539 - 795 = \underline{\hspace{1cm}} - \underline{\hspace{1cm}} = \underline{\hspace{2cm}}$

- (3) Find the
- square root**
- of these numbers.

$\sqrt{144} = \underline{\hspace{2cm}}$        $\sqrt{81} = \underline{\hspace{2cm}}$

$\sqrt{225} = \underline{\hspace{2cm}}$        $\sqrt{400} = \underline{\hspace{2cm}}$

- (4)
- Convert**
- these
- percentage**
- to
- decimals**
- .

$70\% = \underline{\hspace{2cm}}$        $39\% = \underline{\hspace{2cm}}$        $0.9\% = \underline{\hspace{2cm}}$

$420\% = \underline{\hspace{2cm}}$        $8\% = \underline{\hspace{2cm}}$        $66\frac{2}{3}\% = \underline{\hspace{2cm}}$

- (5)
- Adding**
- large numbers.

|  |       |
|--|-------|
|  | 315   |
| $9309 + 63 + 808 = \underline{\hspace{2cm}}$ | 36825 |

|   |        |
|---|--------|
|   | 457    |
| $2631 + 38274 + 699 = \underline{\hspace{2cm}}$ | + 1780 |

$5205 + 678 + 14267 = \underline{\hspace{2cm}}$

- (6)
- Subtracting**
- large numbers.

|  |       |
|--|-------|
| $3578 - \underline{\hspace{2cm}} = 2849$ | 12385 |
|--|-------|

|   |   |
|---|---|
| $\underline{\hspace{2cm}} - 4872 = 27967$ | - |
|---|---|

|   |      |
|---|------|
| $29167 - \underline{\hspace{2cm}} = 256691$ | 6789 |
|---|------|

- (7)
- Multiplying**
- whole numbers.

|            |            |             |
|------------|------------|-------------|
|            | 1673       |             |
| $4108$     | $2945$     | $\times 39$ |
| $\times 7$ | $\times 6$ |             |

$\underline{\hspace{2cm}}$

$\underline{\hspace{2cm}}$

- (8)
- Dividing**
- large numbers with remainders.

$7 \overline{) 953}$

$5 \overline{) 6581}$

$4 \overline{) 719}$

$9 \overline{) 7068}$

Working Space

(1) **Order of operations.****BEDMAS**

Working Space

$15 + 6 \times 9 = \underline{\hspace{2cm}}$

$91 - 60 \div 15 = \underline{\hspace{2cm}}$

$72 \div 8 + 7^2 = \underline{\hspace{2cm}}$

$5(31 - 3 \times 8) = \underline{\hspace{2cm}}$

(2) **Find the square or powers of these numbers.**

$5^2 = \underline{\hspace{2cm}}$

$11^2 = \underline{\hspace{2cm}}$

$10^3 = \underline{\hspace{2cm}}$

$3^4 = \underline{\hspace{2cm}}$

(3) **Convert these percentages to fractions.**

$33\frac{1}{3}\% = \underline{\hspace{2cm}}$

$80\% = \underline{\hspace{2cm}}$

$75\% = \underline{\hspace{2cm}}$

$4\% = \underline{\hspace{2cm}}$

$150\% = \underline{\hspace{2cm}}$

$43\% = \underline{\hspace{2cm}}$

(4) **Round these numbers to 1 decimal place.**

$3.94 = \underline{\hspace{2cm}}$

$9.06 = \underline{\hspace{2cm}}$

$21.45 = \underline{\hspace{2cm}}$

$6.128 = \underline{\hspace{2cm}}$

(5) **Adding large numbers.**

2571

$734 + 68 + 2412 = \underline{\hspace{2cm}}$

83

$547 + \underline{\hspace{2cm}} + 35 = 3412$

31426

$71 + 942 + \underline{\hspace{2cm}} = 1670$

+ 625

(6) **Subtracting large numbers.**

$3084 - 447 = \underline{\hspace{2cm}}$

54806

$45780 - 7372 = \underline{\hspace{2cm}}$

- 7385

$156273 - 5348 = \underline{\hspace{2cm}}$

(7) **Multiplying large numbers using place value.***Example:  $231 \times 3 = (200 \times 3) + (30 \times 3) + (1 \times 3) = 600 + 90 + 3 = 693$* 

$453 \times 7 = (\underline{\hspace{1cm}} \times \underline{\hspace{1cm}}) + (\underline{\hspace{1cm}} \times \underline{\hspace{1cm}}) + (\underline{\hspace{1cm}} \times \underline{\hspace{1cm}})$

$= \underline{\hspace{1cm}} + \underline{\hspace{1cm}} + \underline{\hspace{1cm}} = \underline{\hspace{2cm}}$

(8) **Dividing large numbers using multiples of 10.***Example:  $145 \div 5 = (100 \div 5) + (45 \div 5) = 20 + 9 = 29$* 

$927 \div 9 = (\underline{\hspace{1cm}} \div \underline{\hspace{1cm}}) + (\underline{\hspace{1cm}} \div \underline{\hspace{1cm}})$

$= \underline{\hspace{1cm}} + \underline{\hspace{1cm}} = \underline{\hspace{2cm}}$

(1) **Dividing by 10, 100 or 1000.**

$245 \div 10 = \underline{\hspace{2cm}}$        $5.76 \div 100 = \underline{\hspace{2cm}}$

$89.34 \div 100 = \underline{\hspace{2cm}}$        $1047 \div 1000 = \underline{\hspace{2cm}}$

(2) **Find each fraction of these decimals.**

$\frac{1}{3}$  of 14.4 = \_\_\_\_\_       $\frac{2}{5}$  of 6.5 = \_\_\_\_\_

$\frac{3}{7}$  of 6.3 = \_\_\_\_\_       $\frac{4}{9}$  of 0.72 = \_\_\_\_\_

(3) **Round these numbers to 1 significant figure.**

$2350 = \underline{\hspace{2cm}}$        $69000 = \underline{\hspace{2cm}}$

$0.021 = \underline{\hspace{2cm}}$        $0.0048 = \underline{\hspace{2cm}}$

(4) **Convert these decimals to percentages.**

$0.23 = \underline{\hspace{2cm}}$        $0.66 = \underline{\hspace{2cm}}$        $0.08 = \underline{\hspace{2cm}}$

$0.45 = \underline{\hspace{2cm}}$        $3.50 = \underline{\hspace{2cm}}$        $0.7 = \underline{\hspace{2cm}}$

(5) **Adding decimals.**

|  |         |
|--|---------|
|  | 4.37    |
| $72.6 + 4.853 + 42 = \underline{\hspace{2cm}}$ | 129.80  |
| $4.7 + 223 + 34.98 = \underline{\hspace{2cm}}$ | 0.22    |
|  | + 85.08 |
| $6941 + 8.6 + 1.19 = \underline{\hspace{2cm}}$ | <hr/>   |

(6) **Subtracting decimals.**

|   |             |
|---|-------------|
| $723.8 - \underline{\hspace{2cm}} = 71.53$  | $439.58$    |
| $\underline{\hspace{2cm}} - 64.9 = 326.3$   | -           |
| $510.94 - \underline{\hspace{2cm}} = 312.7$ | <hr/> 97.99 |

(7) **Multiplying decimals.**

|              |               |               |
|--------------|---------------|---------------|
|              | $0.479$       |               |
| $2.85$       | $61.54$       | $\times 0.59$ |
| $\times 0.4$ | $\times 0.07$ |               |
| <hr/>        | <hr/>         | <hr/>         |
| <hr/>        | <hr/>         | <hr/>         |

(8) **Dividing large numbers using 'tidy' numbers.***Example:*  $195 \div 5 = (200 \div 5) - (5 \div 5) = 20 - 1 = 19$ 

$665 \div 7 = (\underline{\hspace{1cm}} \div \underline{\hspace{1cm}}) - (\underline{\hspace{1cm}} \div \underline{\hspace{1cm}})$

$= \underline{\hspace{1cm}} - \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$

Working Space

- (1) Convert these mixed numbers to improper fractions. Example:  $4\frac{2}{3} = \frac{14}{3}$

$$2\frac{3}{4} = \underline{\hspace{2cm}}$$

$$7\frac{2}{9} = \underline{\hspace{2cm}}$$

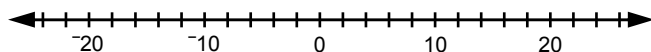
$$4\frac{1}{5} = \underline{\hspace{2cm}}$$

$$8\frac{5}{6} = \underline{\hspace{2cm}}$$



Working Space

- (2) Add these positive and negative numbers.



$$-18 + 13 = \underline{\hspace{2cm}}$$

$$-19 + 23 = \underline{\hspace{2cm}}$$

$$20 + -15 = \underline{\hspace{2cm}}$$



$$-8 + -9 = \underline{\hspace{2cm}}$$

- (3) Add or subtract these fractions

$$\frac{1}{2} + \frac{1}{4} = \underline{\hspace{2cm}} \quad \frac{2}{3} + \frac{1}{4} = \underline{\hspace{2cm}}$$

$$\frac{5}{6} - \frac{1}{3} = \underline{\hspace{2cm}} \quad \frac{4}{5} - \frac{3}{10} = \underline{\hspace{2cm}}$$

- (4) Find the percentage of these numbers.

$$50\% \text{ of } 250 = \underline{\hspace{2cm}} \quad 20\% \text{ of } 140 = \underline{\hspace{2cm}}$$

$$66\frac{2}{3}\% \text{ of } 120 = \underline{\hspace{2cm}} \quad 75\% \text{ of } 240 = \underline{\hspace{2cm}}$$

- (5) Adding decimals.

$$\begin{array}{r} 75.81 \\ 79.96 + 58.3 + 52 = \underline{\hspace{2cm}} \\ 64.75 + \underline{\hspace{2cm}} + 29 = 130.45 \\ 59 + 4.4 + \underline{\hspace{2cm}} = 81.13 \end{array}$$

75.81

3.35

462.07

+ 0.98

- (6) Subtracting decimals.

$$\begin{array}{r} 329.2 - 16.4 = \underline{\hspace{2cm}} \\ 858.87 - 57.24 = \underline{\hspace{2cm}} \\ 243.62 - 98.9 = \underline{\hspace{2cm}} \end{array}$$

83.95

- 7.82

- (7) Multiplying large numbers using 'tidy' numbers.

Example:  $296 \times 3 = (300 \times 3) - (4 \times 3) = 900 - 12 = 888$

$$475 \times 5 = (\underline{\hspace{1cm}} \times \underline{\hspace{1cm}}) - (\underline{\hspace{1cm}} \times \underline{\hspace{1cm}})$$

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

- (8) Dividing decimals with remainders.

$$6 \overline{) 56.1}$$

$$9 \overline{) 5.708}$$

$$4 \overline{) 8.93}$$

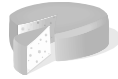
$$7 \overline{) 82.43}$$

- (1) Round these numbers to 2 decimal places.

$4.637 = \underline{\hspace{2cm}} \quad 3.715 = \underline{\hspace{2cm}}$

$20.109 = \underline{\hspace{2cm}} \quad 9.1237 = \underline{\hspace{2cm}}$

- (2) Write two smaller equivalent fractions for each fraction given.



$$\frac{12}{48} = \frac{\hspace{1cm}}{\hspace{1cm}} = \frac{\hspace{1cm}}{\hspace{1cm}} \quad \frac{18}{54} = \frac{\hspace{1cm}}{\hspace{1cm}} = \frac{\hspace{1cm}}{\hspace{1cm}}$$

- (3) Find the percentage of these decimals.

$10\% \text{ of } 1.50 = \underline{\hspace{2cm}} \quad 33\frac{1}{3}\% \text{ of } 2.10 = \underline{\hspace{2cm}}$

$40\% \text{ of } 21.80 = \underline{\hspace{2cm}} \quad 90\% \text{ of } 3.60 = \underline{\hspace{2cm}}$

- (4) Convert these fractions to percentages.

$\frac{1}{3} = \underline{\hspace{2cm}} \quad \frac{3}{5} = \underline{\hspace{2cm}} \quad \frac{9}{10} = \underline{\hspace{2cm}}$

$\frac{3}{100} = \underline{\hspace{2cm}} \quad \frac{3}{40} = \underline{\hspace{2cm}} \quad \frac{7}{8} = \underline{\hspace{2cm}}$

- (5) Adding large numbers.

$$\begin{array}{r} 3713 + 712 + 43 = \underline{\hspace{2cm}} \\ 252 \\ 63 \\ 10936 \\ + 512 \\ \hline 92 + 194 + 4474 = \underline{\hspace{2cm}} \end{array}$$

- (6) Subtracting large numbers.

$$\begin{array}{r} 2836 - \underline{\hspace{2cm}} = 1526 \\ \underline{\hspace{2cm}} - 2068 = 794 \\ 21753 - \underline{\hspace{2cm}} = 17096 \\ 13359 \\ - \\ \hline 6531 \end{array}$$

- (7) Multiplying whole numbers.

$$\begin{array}{r} 795 \\ \times 5 \\ \hline \end{array} \quad \begin{array}{r} 413 \\ \times 6 \\ \hline \end{array} \quad \begin{array}{r} 290 \\ \times 32 \\ \hline \end{array}$$

- (8) Dividing large numbers.

$$\begin{array}{r} \underline{\hspace{1cm}} \\ 2 \overline{) 576} \\ \hline \end{array} \quad \begin{array}{r} \underline{\hspace{1cm}} \\ 5 \overline{) 1725} \\ \hline \end{array}$$

$$\begin{array}{r} \underline{\hspace{1cm}} \\ 3 \overline{) 618} \\ \hline \end{array} \quad \begin{array}{r} \underline{\hspace{1cm}} \\ 4 \overline{) 2864} \\ \hline \end{array}$$

Working Space

- (1) Solve these equations with mixed number answers.



$$7d + 19 = 71 \quad d = \underline{\hspace{2cm}}$$

$$8k - 13 = 65 \quad k = \underline{\hspace{2cm}}$$

Working Space

- (2) Add or subtract these fractions

$$\frac{5}{6} + \frac{1}{3} = \underline{\hspace{2cm}} \quad \frac{3}{4} + \frac{2}{5} = \underline{\hspace{2cm}}$$

$$\frac{7}{9} - \frac{1}{3} = \underline{\hspace{2cm}} \quad \frac{4}{5} - \frac{2}{3} = \underline{\hspace{2cm}}$$

- (3) Add +, -, × or ÷ to make each statement true. Remember ... **BEDMAS**

$$5 \underline{\hspace{0.5cm}} 6 \underline{\hspace{0.5cm}} 13 = 43 \quad 31 \underline{\hspace{0.5cm}} 2 \underline{\hspace{0.5cm}} 9 = 13$$

$$9 \underline{\hspace{0.5cm}} 7 \underline{\hspace{0.5cm}} 4 = 37 \quad 56 \underline{\hspace{0.5cm}} 8 \underline{\hspace{0.5cm}} 9 = 16$$

- (4) Convert these improper fractions to mixed numbers.

$$\frac{23}{6} = \underline{\hspace{2cm}}$$

$$\frac{37}{8} = \underline{\hspace{2cm}}$$

$$\frac{68}{8} = \underline{\hspace{2cm}}$$

$$\frac{75}{9} = \underline{\hspace{2cm}}$$



- (5) Adding large numbers.

$$464 + 18 + 2738 = \underline{\hspace{2cm}} \quad \begin{array}{r} 1765 \\ 81 \end{array}$$

$$553 + \underline{\hspace{2cm}} + 74 = 3412 \quad \begin{array}{r} 35223 \\ + 462 \end{array}$$

$$71 + 942 + \underline{\hspace{2cm}} = 1670 \quad \underline{\hspace{2cm}}$$

- (6) Subtracting large numbers.

$$1289 - 35 = \underline{\hspace{2cm}} \quad \begin{array}{r} 5487 \\ - 642 \end{array}$$

$$13247 - 695 = \underline{\hspace{2cm}} \quad \underline{\hspace{2cm}}$$

$$23785 - 6321 = \underline{\hspace{2cm}} \quad \underline{\hspace{2cm}}$$

- (7) Multiplying large numbers using place value.

Example:  $231 \times 3 = (200 \times 3) + (30 \times 3) + (1 \times 3) = 600 + 90 + 3 = 693$

$$384 \times 4 = (\underline{\hspace{1cm}} \times \underline{\hspace{1cm}}) + (\underline{\hspace{1cm}} \times \underline{\hspace{1cm}}) + (\underline{\hspace{1cm}} \times \underline{\hspace{1cm}})$$

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

- (8) Dividing large numbers using multiples of 10.

Example:  $145 \div 5 = (100 \div 5) + (45 \div 5) = 20 + 9 = 29$

$$376 \div 4 = (\underline{\hspace{1cm}} \div \underline{\hspace{1cm}}) + (\underline{\hspace{1cm}} \div \underline{\hspace{1cm}})$$

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

- (1) What is the **place value** of the **BOLD** digit and what does it mean.

$$8.\mathbf{6}3 = \underline{\hspace{1cm}} = \underline{\hspace{1cm}} \quad 2.\mathbf{104} = \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$$

$$1.\mathbf{94} = \underline{\hspace{1cm}} = \underline{\hspace{1cm}} \quad \mathbf{34.5} = \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$$

- (2) **Round** these numbers to **2 significant figures**.

$$236900 = \underline{\hspace{2cm}} \quad 3541 = \underline{\hspace{2cm}}$$

$$0.0324 = \underline{\hspace{2cm}} \quad 0.0709 = \underline{\hspace{2cm}}$$

- (3) **Complete** these ratios.

*Example:* The ratio 3:4 is the same as 6:8.



$$4:5 = \underline{\hspace{1cm}} : 40 \quad 9: \underline{\hspace{1cm}} = 27:24$$

$$\underline{\hspace{1cm}} : 42 = 5:7 \quad 64:24 = 8: \underline{\hspace{1cm}}$$

- (4) **Write** these **standard forms** as **numbers**.

*Example:*  $520000 = 5.2 \times 10^5$      $0.00014 = 1.4 \times 10^{-4}$



$$2.3 \times 10^4 = \underline{\hspace{2cm}} \quad 1.82 \times 10^3 = \underline{\hspace{2cm}}$$

$$6.4 \times 10^{-5} = \underline{\hspace{2cm}} \quad 4.38 \times 10^{-2} = \underline{\hspace{2cm}}$$

- (5) **Adding** decimals.

$$\begin{array}{r} 90.03 + 43.4 + 8.6 = \underline{\hspace{2cm}} \\ 5.74 + 4 + 38.9 = \underline{\hspace{2cm}} \\ 91 + 1.96 + 54.3 = \underline{\hspace{2cm}} \end{array} \quad \begin{array}{r} 291.8 \\ 2.4 \\ 5341.0 \\ + 38.8 \\ \hline \end{array}$$

- (6) **Subtracting** decimals.

$$\begin{array}{r} 471.1 - \underline{\hspace{1cm}} = 71.9 \\ \underline{\hspace{1cm}} - 46.38 = 509.63 \\ 642.17 - \underline{\hspace{1cm}} = 182.57 \end{array} \quad \begin{array}{r} 193.35 \\ - \\ \hline 88.79 \end{array}$$

- (7) **Multiplying** decimals.

$$\begin{array}{r} 38.5 \\ \times 4 \\ \hline \end{array} \quad \begin{array}{r} 7.29 \\ \times 6 \\ \hline \end{array} \quad \begin{array}{r} 5.14 \\ \times 7.3 \\ \hline \end{array}$$

- (8) **Dividing** large numbers using 'tidy' numbers.

*Example:*  $195 \div 5 = (200 \div 5) - (5 \div 5) = 20 - 1 = 19$

$$224 \div 8 = (\underline{\hspace{1cm}} \div \underline{\hspace{1cm}}) - (\underline{\hspace{1cm}} \div \underline{\hspace{1cm}}) \\ = \underline{\hspace{1cm}} - \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$$

Working Space

- (1) Solve these equations with mixed number answers.

$$7d + 19 = 102 \quad d = \underline{\hspace{2cm}}$$

$$8k - 23 = 78 \quad k = \underline{\hspace{2cm}}$$



Working Space

- (2) Write these numbers in standard form.

Example:  $520000 = 5.2 \times 10^5$      $0.00014 = 1.4 \times 10^{-4}$



$$610000 = \underline{\hspace{2cm}} \quad 0.000034 = \underline{\hspace{2cm}}$$

$$00.0792 = \underline{\hspace{2cm}} \quad 5180000 = \underline{\hspace{2cm}}$$

- (3) A car is travelling at 90 kilometres per hour.  
How far will the car travel in ....

$$3 \text{ hours } \underline{\hspace{2cm}}$$

$$5 \text{ hours } \underline{\hspace{2cm}}$$

$$1.5 \text{ hours } \underline{\hspace{2cm}} ?$$



- (4) Convert these decimals to fractions.

$$0.5 = \underline{\hspace{2cm}} \quad 0.48 = \underline{\hspace{2cm}} \quad 0.05 = \underline{\hspace{2cm}}$$

$$0.75 = \underline{\hspace{2cm}} \quad 0.66 = \underline{\hspace{2cm}} \quad 0.002 = \underline{\hspace{2cm}}$$

- (5) Adding decimals.

$$\begin{array}{r} 73.81 \\ 72.96 + 58.3 + 59 = \underline{\hspace{2cm}} \\ 69.75 + \underline{\hspace{2cm}} + 24 = 130.54 \\ 59 + 4.4 + \underline{\hspace{2cm}} = 81.31 \end{array}$$

$$\begin{array}{r} 0.35 \\ 462.08 \\ + 5.97 \\ \hline \end{array}$$

- (6) Subtracting decimals.

$$326.2 - 19.4 = \underline{\hspace{2cm}} \quad 58.84$$

$$587.27 - 58.84 = \underline{\hspace{2cm}} \quad - 7.28$$

$$289.62 - 65.9 = \underline{\hspace{2cm}}$$

- (7) Multiplying large numbers using 'tidy' numbers.

Example:  $296 \times 3 = (300 \times 3) - (4 \times 3) = 900 - 12 = 888$

$$386 \times 5 = (\underline{\hspace{2cm}} \times \underline{\hspace{2cm}}) - (\underline{\hspace{2cm}} \times \underline{\hspace{2cm}})$$

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

- (8) Dividing decimals.

$$3 \overline{) 1.98}$$

$$4 \overline{) 34.08}$$

$$6 \overline{) 29.4}$$

$$7 \overline{) 2.002}$$



(1) **Order of operations.****BEDMAS**

Working Space

$45 + 84 \div 7 = \underline{\hspace{2cm}}$        $180 - 7 \times 15 = \underline{\hspace{2cm}}$

$3 \times 9 + 4^2 = \underline{\hspace{2cm}}$        $4(4 + 7 \times 3) = \underline{\hspace{2cm}}$

(2) **Complete these ratios.***Example:* The ratio 3:4 is the same as 6:8.

$27:18 = \underline{\hspace{1cm}}:2$        $7:\underline{\hspace{1cm}} = 28:36$

$\underline{\hspace{1cm}}:8 = 3:24$        $40:75 = 8:\underline{\hspace{1cm}}$

(3) **Write these standard forms as numbers.***Example:*  $520000 = 5.2 \times 10^5$        $0.00014 = 1.4 \times 10^{-4}$ 

$5.6 \times 10^3 = \underline{\hspace{2cm}}$        $6.3 \times 10^5 = \underline{\hspace{2cm}}$

$8.1 \times 10^{-4} = \underline{\hspace{2cm}}$        $9.05 \times 10^{-3} = \underline{\hspace{2cm}}$

(4) **Convert these fractions to decimals.**

$\frac{1}{2} = \underline{\hspace{1cm}}$        $\frac{2}{5} = \underline{\hspace{1cm}}$        $\frac{5}{8} = \underline{\hspace{1cm}}$

$\frac{2}{3} = \underline{\hspace{1cm}}$        $\frac{7}{10} = \underline{\hspace{1cm}}$        $\frac{1}{20} = \underline{\hspace{1cm}}$

(5) **Adding large numbers.**

|                   |                   |       |
|-------------------|-------------------|-------|
|                   |                   | 938   |
| 822 + 4765 + 34 = | <u>          </u> | 12587 |
| 34 + 482 + 3279 = | <u>          </u> | 20    |
| 6149 + 81 + 916 = | <u>          </u> | + 402 |
|                   | <u>          </u> |       |

(6) **Subtracting large numbers.**

|         |                   |              |             |
|---------|-------------------|--------------|-------------|
| 7283 -  | <u>          </u> | = 7135       | 3959        |
|         | <u>          </u> | - 694 = 3236 | -           |
| 11127 - | <u>          </u> | = 8090       | <u>3798</u> |

(7) **Multiplying whole numbers.**

|                   |                   |                   |
|-------------------|-------------------|-------------------|
|                   |                   | 274               |
| 931               | 752               | x 76              |
| x 8               | x 9               | <u>          </u> |
| <u>          </u> | <u>          </u> | <u>          </u> |
| <u>          </u> | <u>          </u> | <u>          </u> |

(8) **Dividing large numbers, some with remainders.**

|   |   |            |   |   |             |
|---|---|------------|---|---|-------------|
| 6 | ) | <u>474</u> | 8 | ) | <u>5792</u> |
| 7 | ) | <u>553</u> | 9 | ) | <u>8439</u> |

- (1) Write these numbers in standard form.

Example:  $520000 = 5.2 \times 10^5$     $0.00014 = 1.4 \times 10^{-4}$



$$45000000 = \underline{\hspace{2cm}} \quad 0.0063 = \underline{\hspace{2cm}}$$

$$0.000592 = \underline{\hspace{2cm}} \quad 674000 = \underline{\hspace{2cm}}$$

- (2) Find the percentage of these decimals.

$$50\% \text{ of } 7.2 = \underline{\hspace{2cm}} \quad 33\frac{1}{3}\% \text{ of } 12.9 = \underline{\hspace{2cm}}$$

$$25\% \text{ of } 6.4 = \underline{\hspace{2cm}} \quad 90\% \text{ of } 6.0 = \underline{\hspace{2cm}}$$

- (3) Meat costs \$16.60 per kilogram.
- 
- How much would it cost to buy ....

$$2 \text{ kgs of meat } \underline{\hspace{2cm}}$$

$$0.5 \text{ kgs of meat } \underline{\hspace{2cm}}$$

$$1.25 \text{ kgs of meat } \underline{\hspace{2cm}} ?$$



- (4) Add +, -, × or ÷ to make each statement true. Remember ...
- BEDMAS**

$$6 \underline{\hspace{0.5cm}} 7 \underline{\hspace{0.5cm}} 9 = 51 \quad 80 \underline{\hspace{0.5cm}} 5 \underline{\hspace{0.5cm}} 4 = 60$$

$$17 \underline{\hspace{0.5cm}} 32 \underline{\hspace{0.5cm}} 4 = 25 \quad 22 \underline{\hspace{0.5cm}} 8 \underline{\hspace{0.5cm}} 3 = 46$$

- (5) Adding large numbers.

$$699 + 4613 + 70 = \underline{\hspace{2cm}} \quad \begin{array}{r} 949 \\ 3273 \end{array}$$

$$76 + \underline{\hspace{2cm}} + 3171 = 3901 \quad \begin{array}{r} 60 \\ + 541 \end{array}$$

$$2389 + 58 + \underline{\hspace{2cm}} = 3049 \quad \underline{\hspace{2cm}}$$

- (6) Subtracting large numbers.

$$1582 - 727 = \underline{\hspace{2cm}} \quad \begin{array}{r} 16325 \\ - 945 \end{array}$$

$$25073 - 902 = \underline{\hspace{2cm}} \quad \underline{\hspace{2cm}}$$

$$74075 - 8516 = \underline{\hspace{2cm}} \quad \underline{\hspace{2cm}}$$

- (7) Multiplying large numbers using place value.

Example:  $231 \times 3 = (200 \times 3) + (30 \times 3) + (1 \times 3) = 600 + 90 + 3 = 693$

$$583 \times 7 = (\underline{\hspace{1cm}} \times \underline{\hspace{1cm}}) + (\underline{\hspace{1cm}} \times \underline{\hspace{1cm}}) + (\underline{\hspace{1cm}} \times \underline{\hspace{1cm}})$$

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

- (8) Dividing large numbers using multiples of 10.

Example:  $145 \div 5 = (100 \div 5) + (45 \div 5) = 20 + 9 = 29$

$$954 \div 9 = (\underline{\hspace{1cm}} \div \underline{\hspace{1cm}}) + (\underline{\hspace{1cm}} \div \underline{\hspace{1cm}})$$

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

Working Space

- (1)
- Add and subtract**
- these integers.

$-21 + 17 = \underline{\hspace{2cm}}$       $-18 - 14 = \underline{\hspace{2cm}}$

$32 - -15 = \underline{\hspace{2cm}}$       $-41 - -29 = \underline{\hspace{2cm}}$

- (2)
- Estimate**
- an answer by rounding the \$\$\$ first.

$\$8.90 \times 5 = \underline{\hspace{2cm}}$       $\$7.25 \times 9 = \underline{\hspace{2cm}}$

$\$48.60 \div 7 = \underline{\hspace{2cm}}$       $\$63.80 \div 8 = \underline{\hspace{2cm}}$

- (3) Find the
- square root**
- of these numbers.

$\sqrt{49} = \underline{\hspace{2cm}}$       $\sqrt{144} = \underline{\hspace{2cm}}$

$\sqrt{225} = \underline{\hspace{2cm}}$       $\sqrt{400} = \underline{\hspace{2cm}}$

- (4)
- Convert**
- these decimals to fractions.

$0.25 = \underline{\hspace{2cm}}$       $0.6 = \underline{\hspace{2cm}}$       $0.05 = \underline{\hspace{2cm}}$

$0.9 = \underline{\hspace{2cm}}$       $0.3 = \underline{\hspace{2cm}}$       $1.5 = \underline{\hspace{2cm}}$

- (5)
- Adding**
- decimals.

|   |         |  |
|---|---------|--|
|   | 0.25    |  |
| $80.09 + 6.8 + 293.3 = \underline{\hspace{2cm}}$  | 317.15  |  |
| $9.31 + 382.94 + 62.7 = \underline{\hspace{2cm}}$ | 0.57    |  |
| $5.785 + 4.20 + 16.67 = \underline{\hspace{2cm}}$ | + 68.80 |  |

- (6)
- Subtracting**
- decimals.

|   |       |  |
|---|-------|--|
| $468.8 - \underline{\hspace{2cm}} = 395.9$    | 627.5 |  |
| $\underline{\hspace{2cm}} - 386.2 = 178.67$   | -     |  |
| $3926.7 - \underline{\hspace{2cm}} = 3576.91$ | 567.9 |  |

- (7)
- Multiplying**
- decimals.

|            |            |              |
|------------|------------|--------------|
|            | 38.5       |              |
| $58.3$     | 94.1       | $\times 4.9$ |
| $\times 5$ | $\times 8$ |              |
| <hr/>      | <hr/>      | <hr/>        |
| <hr/>      | <hr/>      | <hr/>        |

- (8)
- Dividing**
- large numbers using 'tidy' numbers.

*Example:*  $195 \div 5 = (200 \div 5) - (5 \div 5) = 20 - 1 = 19$ 

$882 \div 9 = (\underline{\hspace{1cm}} \div \underline{\hspace{1cm}}) - (\underline{\hspace{1cm}} \div \underline{\hspace{1cm}})$

$= \underline{\hspace{1cm}} - \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$

Working Space

(1) **Order of operations.****BEDMAS**

Working Space

$25 + 108 \div 9 = \underline{\hspace{2cm}}$       $81 - 7 \times 8 = \underline{\hspace{2cm}}$

$5 \times 6 + 4^2 = \underline{\hspace{2cm}}$       $3(10 + 5 \times 6) = \underline{\hspace{2cm}}$

(2) **Find the square or powers of these numbers.**

$9^2 = \underline{\hspace{2cm}}$       $7^2 = \underline{\hspace{2cm}}$

$10^3 = \underline{\hspace{2cm}}$       $5^4 = \underline{\hspace{2cm}}$

(3) **Convert these percentages to fractions.**

$75\% = \underline{\hspace{2cm}}$       $40\% = \underline{\hspace{2cm}}$       $37\% = \underline{\hspace{2cm}}$

$66\frac{2}{3}\% = \underline{\hspace{2cm}}$       $125\% = \underline{\hspace{2cm}}$       $6\% = \underline{\hspace{2cm}}$

(4) **Round these numbers to 1 decimal place.**

$4.96 = \underline{\hspace{2cm}}$       $7.21 = \underline{\hspace{2cm}}$

$12.739 = \underline{\hspace{2cm}}$       $32.847 = \underline{\hspace{2cm}}$

(5) **Adding decimals.**

8.81

$387.5 + 2.64 + 62.1 = \underline{\hspace{2cm}}$      0.57

$89.34 + \underline{\hspace{2cm}} + 2.15 = 675.09$      41.43

$144.5 + 68.69 + \underline{\hspace{2cm}} = 233.47$      + 3.90

(6) **Subtracting decimals.**

$402.8 - 48.4 = \underline{\hspace{2cm}}$      595.06

$247.70 - 66.32 = \underline{\hspace{2cm}}$      - 48.85

$2637.73 - 465.8 = \underline{\hspace{2cm}}$

(7) **Multiplying large numbers using 'tidy' numbers.***Example:  $296 \times 3 = (300 \times 3) - (4 \times 3) = 900 - 12 = 888$* 

$596 \times 6 = (\underline{\hspace{1cm}} \times \underline{\hspace{1cm}}) - (\underline{\hspace{1cm}} \times \underline{\hspace{1cm}})$

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

(8) **Dividing decimals.**

$$\begin{array}{r} 6 \overline{) 4.44} \end{array}$$

$$\begin{array}{r} 7 \overline{) 3.136} \end{array}$$

$$\begin{array}{r} 8 \overline{) 41.6} \end{array}$$

$$\begin{array}{r} 9 \overline{) 28.62} \end{array}$$

- (1) Convert these mixed numbers to improper fractions.

$2\frac{3}{5} = \underline{\hspace{2cm}}$

$6\frac{8}{9} = \underline{\hspace{2cm}}$

$7\frac{5}{8} = \underline{\hspace{2cm}}$

$9\frac{2}{3} = \underline{\hspace{2cm}}$



Working Space

- (2) Find each fraction of these decimals.

$\frac{2}{3}$  of 1.2 = \_\_\_\_\_  $\frac{5}{8}$  of 41.6 = \_\_\_\_\_

$\frac{3}{4}$  of 2.4 = \_\_\_\_\_  $\frac{3}{7}$  of 23.8 = \_\_\_\_\_

- (3) Round these numbers to 1 significant figure.

$63500 = \underline{\hspace{2cm}}$   $946 = \underline{\hspace{2cm}}$

$0.087 = \underline{\hspace{2cm}}$   $0.00639 = \underline{\hspace{2cm}}$

- (4) Convert these decimals to percentages.

$0.67 = \underline{\hspace{2cm}}$   $0.3 = \underline{\hspace{2cm}}$   $0.95 = \underline{\hspace{2cm}}$

$0.75 = \underline{\hspace{2cm}}$   $0.05 = \underline{\hspace{2cm}}$   $1.2 = \underline{\hspace{2cm}}$

- (5) Adding large numbers.

$347 + 1129 + 53 = \underline{\hspace{2cm}}$

$30 + 998 + 2745 = \underline{\hspace{2cm}}$

$1426 + 70 + 298 = \underline{\hspace{2cm}}$

 $570$ 
 $67$ 
 $2985$ 
 $+ 315$ 

- (6) Subtracting large numbers.

$2896 - \underline{\hspace{2cm}} = 2032$

$\underline{\hspace{2cm}} - 538 = 4149$

$6353 - \underline{\hspace{2cm}} = 3928$

 $3857$ 
 $-$ 
 $2461$ 

- (7) Multiplying whole numbers.

 $926$ 
 $\times 4$ 
 $623$ 
 $\times 9$ 
 $583$ 
 $\times 67$ 

- (8) Dividing large numbers.

$9 \overline{) 351}$

$8 \overline{) 608}$

$6 \overline{) 3162}$

$7 \overline{) 4613}$

- (1) Round these numbers to 2 decimal places.

$0.327 = \underline{\hspace{2cm}}$        $0.0639 = \underline{\hspace{2cm}}$

$30.109 = \underline{\hspace{2cm}}$        $140.275 = \underline{\hspace{2cm}}$

- (2) Find the percentage of these decimals.

$10\% \text{ of } 6.8 = \underline{\hspace{2cm}}$        $33\frac{1}{3}\% \text{ of } 15.6 = \underline{\hspace{2cm}}$

$25\% \text{ of } 4.96 = \underline{\hspace{2cm}}$        $5\% \text{ of } 8.4 = \underline{\hspace{2cm}}$

- (3) Add or subtract these fractions

$\frac{1}{2} + \frac{3}{4} = \underline{\hspace{2cm}}$        $\frac{2}{3} + \frac{5}{6} = \underline{\hspace{2cm}}$

$\frac{2}{3} - \frac{1}{6} = \underline{\hspace{2cm}}$        $\frac{7}{8} - \frac{1}{4} = \underline{\hspace{2cm}}$

- (4) Convert these fractions to decimals.

$\frac{2}{5} = \underline{\hspace{2cm}}$        $\frac{3}{4} = \underline{\hspace{2cm}}$        $\frac{7}{8} = \underline{\hspace{2cm}}$

$\frac{1}{20} = \underline{\hspace{2cm}}$        $\frac{9}{10} = \underline{\hspace{2cm}}$        $\frac{3}{2} = \underline{\hspace{2cm}}$

- (5) Adding large numbers.

$$\begin{array}{r} 412 + 1354 + 82 = \underline{\hspace{2cm}} \\ 98 + \underline{\hspace{2cm}} + 1367 = 1672 \\ 2345 + 82 + \underline{\hspace{2cm}} = 2613 \end{array}$$

357

3168

28

+ 514

- (6) Subtracting large numbers.

$$\begin{array}{r} 4037 - 387 = \underline{\hspace{2cm}} \\ 5903 - 917 = \underline{\hspace{2cm}} \\ 10283 - 827 = \underline{\hspace{2cm}} \end{array}$$

42000

- 864

- (7) Multiplying large numbers using place value.

Example:  $231 \times 3 = (200 \times 3) + (30 \times 3) + (1 \times 3) = 600 + 90 + 3 = 693$

$$\begin{array}{l} 756 \times 7 = (\underline{\hspace{1cm}} \times \underline{\hspace{1cm}}) + (\underline{\hspace{1cm}} \times \underline{\hspace{1cm}}) + (\underline{\hspace{1cm}} \times \underline{\hspace{1cm}}) \\ = \underline{\hspace{2cm}} + \underline{\hspace{2cm}} + \underline{\hspace{2cm}} = \underline{\hspace{2cm}} \end{array}$$

- (8) Dividing large numbers using multiples of 10.

Example:  $145 \div 5 = (100 \div 5) + (45 \div 5) = 20 + 9 = 29$

$$\begin{array}{l} 1664 \div 8 = (\underline{\hspace{1cm}} \div \underline{\hspace{1cm}}) + (\underline{\hspace{1cm}} \div \underline{\hspace{1cm}}) \\ = \underline{\hspace{2cm}} + \underline{\hspace{2cm}} = \underline{\hspace{2cm}} \end{array}$$

Working Space

- (1) Solve these equations with mixed number answers.



$$4(d + 7) = 53 \quad d = \underline{\hspace{2cm}}$$

$$5(k - 6) = 19 \quad k = \underline{\hspace{2cm}}$$

Working Space

- (2) Add and subtract these integers.

$$-45 + 62 = \underline{\hspace{2cm}} \quad -34 - 18 = \underline{\hspace{2cm}}$$

$$25 - -17 = \underline{\hspace{2cm}} \quad -43 - -27 = \underline{\hspace{2cm}}$$

- (3) Find the percentage of these decimals.

$$50\% \text{ of } 1.7 = \underline{\hspace{2cm}} \quad 5\% \text{ of } 6.4 = \underline{\hspace{2cm}}$$

$$66\frac{2}{3}\% \text{ of } 5.4 = \underline{\hspace{2cm}} \quad 80\% \text{ of } 3.5 = \underline{\hspace{2cm}}$$

- (4) Convert these percentages to decimals.

$$65\% = \underline{\hspace{2cm}} \quad 8\% = \underline{\hspace{2cm}} \quad 37\% = \underline{\hspace{2cm}}$$

$$80\% = \underline{\hspace{2cm}} \quad 33\frac{1}{3}\% = \underline{\hspace{2cm}} \quad 150\% = \underline{\hspace{2cm}}$$

- (5) Adding decimals.

$$\begin{array}{r} 30.84 + 556.73 + 9.2 = \underline{\hspace{2cm}} \\ 293.29 + 6.1 + 74.58 = \underline{\hspace{2cm}} \\ 4.1 + 39.6 + 628.7 = \underline{\hspace{2cm}} \end{array}$$

9.5

4133.5

71.5

+ 621.1

- (6) Subtracting decimals.

$$\begin{array}{r} 271.34 - \underline{\hspace{2cm}} = 187.84 \\ \underline{\hspace{2cm}} - 21.53 = 457.20 \\ 1788.4 - \underline{\hspace{2cm}} = 125.87 \end{array}$$

496.13

-

443.49

- (7) Multiplying decimals.

$$\begin{array}{r} 73.6 \quad 9.03 \quad 41.7 \\ \times 5 \quad \times 8 \quad \times 6.9 \\ \hline \end{array}$$

- (8) Dividing large numbers using 'tidy' numbers.

Example:  $195 \div 5 = (200 \div 5) - (5 \div 5) = 20 - 1 = 19$

$$672 \div 7 = (\underline{\hspace{2cm}} \div \underline{\hspace{2cm}}) - (\underline{\hspace{2cm}} \div \underline{\hspace{2cm}})$$

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

- (1) A car is travelling at 90 kilometres per hour.  
How far will the car travel in ....

4 hours \_\_\_\_\_

7 hours \_\_\_\_\_

2.25 hours \_\_\_\_\_ ?



Working Space

- (2) Write two smaller equivalent fractions for each fraction given.



$$\frac{24}{48} = \frac{\quad}{\quad} = \frac{\quad}{\quad} \quad \frac{32}{72} = \frac{\quad}{\quad} = \frac{\quad}{\quad}$$

- (3) Add +, -, × or ÷ to make each statement true. Remember ... **BEDMAS**

$$6 \quad \_ \quad 3 \quad \_ \quad 11 = 29$$

$$45 \quad \_ \quad 7 \quad \_ \quad 4 = 17$$

$$36 \quad \_ \quad 6 \quad \_ \quad 4 = 12$$

$$21 \quad \_ \quad 56 \quad \_ \quad 8 = 14$$

- (4) Convert these improper fractions to mixed numbers

$$\frac{45}{6} = \frac{\quad}{\quad}$$

$$\frac{50}{7} = \frac{\quad}{\quad}$$

$$\frac{39}{9} = \frac{\quad}{\quad}$$

$$\frac{63}{8} = \frac{\quad}{\quad}$$



- (5) Adding decimals.

$$\begin{array}{r} 24.6 + 317.2 + 3.65 = \underline{\quad\quad\quad} \\ 144.5 + \underline{\quad\quad\quad} + 2.75 = 157.67 \\ 6.89 + 49.3 + \underline{\quad\quad\quad} = 302.54 \end{array}$$

341.9

32.9

5150.8

+ 27.7

- (6) Subtracting decimals.

$$159.45 - 6.27 = \underline{\quad\quad\quad} \quad 159.83$$

$$75.782 - 2.36 = \underline{\quad\quad\quad} \quad - 86.96$$

$$942.0 - 474.23 = \underline{\quad\quad\quad}$$

- (7) Multiplying large numbers using 'tidy' numbers.

Example:  $296 \times 3 = (300 \times 3) - (4 \times 3) = 900 - 12 = 888$

$$585 \times 8 = (\underline{\quad} \times \underline{\quad}) - (\underline{\quad} \times \underline{\quad})$$

$$= \underline{\quad\quad\quad} - \underline{\quad\quad\quad} = \underline{\quad\quad\quad}$$

- (8) Dividing decimals.

$$4 \overline{) 3.32}$$

$$7 \overline{) 51.03}$$

$$9 \overline{) 81.9}$$

$$8 \overline{) 623.2}$$



- (1) Solve these equations with mixed number answers.



$$8(d + 4) = 71 \quad d = \underline{\hspace{2cm}}$$

$$7(k - 9) = 29 \quad k = \underline{\hspace{2cm}}$$

Working Space

- (2) Add or subtract these fractions

$$\frac{3}{4} + \frac{3}{4} = \underline{\hspace{2cm}} \quad \frac{2}{3} + \frac{4}{5} = \underline{\hspace{2cm}}$$

$$\frac{7}{8} - \frac{1}{4} = \underline{\hspace{2cm}} \quad \frac{3}{4} - \frac{2}{3} = \underline{\hspace{2cm}}$$

- (3) Complete these ratios.



$$5:8 = \underline{\hspace{2cm}} : 32 \quad 14: \underline{\hspace{2cm}} = 7:9$$

$$\underline{\hspace{2cm}} : 3 = 18:6 \quad 9:5 = 54: \underline{\hspace{2cm}}$$

- (4) Write these standard forms as numbers.



$$1.2 \times 10^4 = \underline{\hspace{2cm}} \quad 5.7 \times 10^5 = \underline{\hspace{2cm}}$$

$$3.4 \times 10^{-3} = \underline{\hspace{2cm}} \quad 6.5 \times 10^{-2} = \underline{\hspace{2cm}}$$

- (5) Adding large numbers.

$$\begin{array}{r} 1732 + 42 + 953 = \underline{\hspace{2cm}} \\ 397 + 5890 + 49 = \underline{\hspace{2cm}} \\ 31 + 389 + 6702 = \underline{\hspace{2cm}} \end{array}$$

5852

770

36

+ 519

- (6) Subtracting large numbers.

$$\begin{array}{r} 6892 - \underline{\hspace{2cm}} = 2060 \\ \underline{\hspace{2cm}} - 897 = 9144 \\ 7347 - \underline{\hspace{2cm}} = 2389 \end{array}$$

6347

-

1422

- (7) Multiplying whole numbers.

$$\begin{array}{r} 829 \\ \times 4 \\ \hline \end{array} \quad \begin{array}{r} 475 \\ \times 6 \\ \hline \end{array} \quad \begin{array}{r} 608 \\ \times 37 \\ \hline \end{array}$$

- (8) Dividing large numbers with remainders.

$$\begin{array}{r} \underline{\hspace{2cm}} \\ 3 \overline{) 487} \\ \hline \end{array} \quad \begin{array}{r} \underline{\hspace{2cm}} \\ 6 \overline{) 2387} \\ \hline \end{array}$$

$$\begin{array}{r} \underline{\hspace{2cm}} \\ 5 \overline{) 784} \\ \hline \end{array} \quad \begin{array}{r} \underline{\hspace{2cm}} \\ 8 \overline{) 9217} \\ \hline \end{array}$$

(1) **Order of operations.****BEDMAS**

$7 + 24 \div 6 - 9 = \underline{\quad\quad}$   $4 \times 5 - 28 \div 7 = \underline{\quad\quad}$

$9^2 - 5 \times 6 + 7 = \underline{\quad\quad}$   $3(4 + 27 \div 9) = \underline{\quad\quad}$

Working Space

(2) **Round these numbers to 2 significant figures.**

$452000 = \underline{\quad\quad\quad}$   $95190 = \underline{\quad\quad\quad}$

$0.00637 = \underline{\quad\quad\quad}$   $0.1084 = \underline{\quad\quad\quad}$

(3) A car is travelling at 80 kilometres per hour.  
How far will the car travel in ...

5 hours \_\_\_\_\_

4.5 hours \_\_\_\_\_

3.75 hours \_\_\_\_\_ ?

(4) **Convert these fractions to percentages.**

$\frac{3}{4} = \underline{\quad\quad\%}$   $\frac{2}{3} = \underline{\quad\quad\%}$   $\frac{2}{5} = \underline{\quad\quad\%}$

$\frac{1}{20} = \underline{\quad\quad\%}$   $\frac{7}{8} = \underline{\quad\quad\%}$   $\frac{3}{50} = \underline{\quad\quad\%}$

(5) **Adding large numbers.**

$$\begin{array}{r} 21 + 3484 + 245 = \underline{\quad\quad\quad} \\ 1876 + \underline{\quad\quad\quad} + 93 = 2127 \\ 254 + 83 + \underline{\quad\quad\quad} = 3162 \end{array}$$

953

4852

73

+ 611

(6) **Subtracting large numbers.**

$5720 - 773 = \underline{\quad\quad\quad}$   $27000$

$7309 - 719 = \underline{\quad\quad\quad}$   $- 795$

$13493 - 839 = \underline{\quad\quad\quad}$

(7) **Multiplying large numbers using place value.***Example:*  $231 \times 3 = (200 \times 3) + (30 \times 3) + (1 \times 3) = 600 + 90 + 3 = 693$ 

$279 \times 9 = (\underline{\quad} \times \underline{\quad}) + (\underline{\quad} \times \underline{\quad}) + (\underline{\quad} \times \underline{\quad})$

$= \underline{\quad\quad} + \underline{\quad\quad} + \underline{\quad\quad} = \underline{\quad\quad}$

(8) **Dividing large numbers using multiples of 10.***Example:*  $145 \div 5 = (100 \div 5) + (45 \div 5) = 20 + 9 = 29$ 

$927 \div 9 = (\underline{\quad\quad} \div \underline{\quad\quad}) + (\underline{\quad\quad} \div \underline{\quad\quad})$

$= \underline{\quad\quad} + \underline{\quad\quad} = \underline{\quad\quad}$

(1) Add or subtract these fractions

$3\frac{1}{4} + 4\frac{2}{3} = \underline{\hspace{2cm}}$

$5\frac{1}{2} + 2\frac{3}{4} = \underline{\hspace{2cm}}$

$1\frac{1}{4} - \frac{7}{8} = \underline{\hspace{2cm}}$

$3\frac{1}{2} - 1\frac{2}{3} = \underline{\hspace{2cm}}$

(2) Write these numbers in standard form.



$960000 = \underline{\hspace{2cm}}$

$0.0072 = \underline{\hspace{2cm}}$

$0.0051 = \underline{\hspace{2cm}}$

$145000000 = \underline{\hspace{2cm}}$

(3) Write these standard forms as numbers.

$2.3 \times 10^3 = \underline{\hspace{2cm}}$

$9.3 \times 10^4 = \underline{\hspace{2cm}}$

$1.4 \times 10^{-4} = \underline{\hspace{2cm}}$

$5.2 \times 10^{-2} = \underline{\hspace{2cm}}$

(4) Add +, -, × or ÷ to make each statement true. Remember ...

BEDMAS

$32 \underline{\hspace{0.2cm}} 8 \underline{\hspace{0.2cm}} 16 = 20$

$7 \underline{\hspace{0.2cm}} 8 \underline{\hspace{0.2cm}} 9 = 65$

$16 \underline{\hspace{0.2cm}} 4 \underline{\hspace{0.2cm}} 5 = 36$

$7 \underline{\hspace{0.2cm}} 6 \underline{\hspace{0.2cm}} 4 \underline{\hspace{0.2cm}} 9 = 6$

(5) Adding decimals.

$5.4 + 67.38 + 305.92 = \underline{\hspace{2cm}}$

$53.31$

$2.10$

$47.85 + 239.61 + 2.9 = \underline{\hspace{2cm}}$

$533.14$

$+ 15.96$

$167.6 + 2.8 + 49.3 = \underline{\hspace{2cm}}$

(6) Subtracting decimals.

$943.43 - \underline{\hspace{2cm}} = 781.48$

$849.13$

$\underline{\hspace{2cm}} - 35.12 = 634.92$

$-$

$2398.3 - \underline{\hspace{2cm}} = 626.78$

$344.49$

(7) Multiplying decimals.

$78.6$

$63.4$

$7.45$

$\times 9.2$

$\times 5$

$\times 8$

(8) Dividing large numbers using 'tidy' numbers.

Example:  $195 \div 5 = (200 \div 5) - (5 \div 5) = 20 - 1 = 19$

$368 \div 8 = (\underline{\hspace{1cm}} \div \underline{\hspace{1cm}}) - (\underline{\hspace{1cm}} \div \underline{\hspace{1cm}})$

$= \underline{\hspace{1cm}} - \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$

Working Space

- (1) Write these numbers in standard form.



$36000 = \underline{\hspace{2cm}} \quad 0.00459 = \underline{\hspace{2cm}}$

$0.000148 = \underline{\hspace{2cm}} \quad 70000000 = \underline{\hspace{2cm}}$

- (2) Complete these ratios.



$56:24 = \underline{\hspace{1cm}}:3 \quad 63:\underline{\hspace{1cm}} = 7:5$

$\underline{\hspace{1cm}}:45 = 4:9 \quad 48:36 = 4:\underline{\hspace{1cm}}$

- (3) Meat costs \$18.60 per kilogram.
- 
- How much would it cost to buy ....



2 kgs of meat  $\underline{\hspace{2cm}}$

0.5 kgs of meat  $\underline{\hspace{2cm}}$

1.25 kgs of meat  $\underline{\hspace{2cm}}?$

- (4) Convert these fractions to decimals.

$\frac{2}{3} = \underline{\hspace{1cm}} \quad \frac{3}{5} = \underline{\hspace{1cm}} \quad \frac{5}{100} = \underline{\hspace{1cm}}$

$\frac{1}{50} = \underline{\hspace{1cm}} \quad \frac{7}{1000} = \underline{\hspace{1cm}} \quad \frac{5}{4} = \underline{\hspace{1cm}}$

- (5) Adding decimals.

$47.8$

$42.6 + 336.2 + 1.75 = \underline{\hspace{2cm}} \quad \begin{array}{r} 5137.7 \\ 1.5 \end{array}$

$415.4 + \underline{\hspace{1cm}} + 7.25 = 721.76 \quad \begin{array}{r} 1.5 \\ + 352.9 \end{array}$

$3.83 + 44.9 + \underline{\hspace{1cm}} = 203.45$

- (6) Subtracting decimals.

$537.41 - 8.25 = \underline{\hspace{2cm}} \quad \begin{array}{r} 3774.1 \\ - 585.7 \end{array}$

$92.316 - 6.74 = \underline{\hspace{2cm}}$

$675.00 - 213.64 = \underline{\hspace{2cm}}$

- (7) Multiplying large numbers using 'tidy' numbers.

*Example:*  $296 \times 3 = (300 \times 3) - (4 \times 3) = 900 - 12 = 888$

$586 \times 6 = (\underline{\hspace{1cm}} \times \underline{\hspace{1cm}}) - (\underline{\hspace{1cm}} \times \underline{\hspace{1cm}})$

$= \underline{\hspace{1cm}} - \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$

- (8) Dividing decimals.

$4 \overline{) 3.84}$

$7 \overline{) 59.22}$

$5 \overline{) 89.5}$

$9 \overline{) 5.148}$

## Number Knowledge Worksheet Answers

| 1              |  |            |         |            |               |        |       |               |       |       |                |       |       |
|----------------|--|------------|---------|------------|---------------|--------|-------|---------------|-------|-------|----------------|-------|-------|
| (1)            | <u>9, 18, 27, 36, 45, 54,</u><br>63, <u>72, 81, 90, 99,</u><br><u>108, 117, 126,</u> 135   |            |         |            |               |        |       |               |       |       |                |       |       |
| (2)            | 230                  680<br>1470                3250   |            |         |            |               |        |       |               |       |       |                |       |       |
| (3)            | $\frac{8}{20}$ $\frac{8}{24}$<br>or                      or<br>$\frac{2}{5}$ $\frac{1}{3}$   |            |         |            |               |        |       |               |       |       |                |       |       |
| (4)            | <table border="1" style="font-size: small;"> <thead> <tr> <th>fraction</th> <th>decimal</th> <th>percentage</th> </tr> </thead> <tbody> <tr> <td><math>\frac{1}{4}</math></td> <td>↔ 0.25</td> <td>↔ 25%</td> </tr> <tr> <td><math>\frac{3}{5}</math></td> <td>↔ 0.6</td> <td>↔ 60%</td> </tr> <tr> <td><math>\frac{7}{10}</math></td> <td>↔ 0.7</td> <td>↔ 70%</td> </tr> </tbody> </table> | fraction   | decimal | percentage | $\frac{1}{4}$ | ↔ 0.25 | ↔ 25% | $\frac{3}{5}$ | ↔ 0.6 | ↔ 60% | $\frac{7}{10}$ | ↔ 0.7 | ↔ 70% |
| fraction       | decimal  | percentage |         |            |               |        |       |               |       |       |                |       |       |
| $\frac{1}{4}$  | ↔ 0.25   | ↔ 25%      |         |            |               |        |       |               |       |       |                |       |       |
| $\frac{3}{5}$  | ↔ 0.6  | ↔ 60%      |         |            |               |        |       |               |       |       |                |       |       |
| $\frac{7}{10}$ | ↔ 0.7  | ↔ 70%      |         |            |               |        |       |               |       |       |                |       |       |
| (5)            | 3888                  11763<br>1031                  4690  |            |         |            |               |        |       |               |       |       |                |       |       |
| (6)            | 1245                  5165<br>12462                23764   |            |         |            |               |        |       |               |       |       |                |       |       |
| (7)            | $(300 \times 4) + (40 \times 4) + (8 \times 4)$<br>$= 1200 + 160 + 32$<br>$= 1392$   |            |         |            |               |        |       |               |       |       |                |       |       |
| (8)            | 378                  255<br>204                  671   |            |         |            |               |        |       |               |       |       |                |       |       |

| 2   |   |
|-----|---|
| (1) | 0.029, 0.25, 2,<br>2.06, 20.04  |
| (2) | 2 = 2, 4, 6, 8, 10<br>5 = 5, 10, 15, 20, 25<br>7 = 7, 14, 21, 28, 35<br>10 = 10, 20, 30, 40, 50 |
| (3) | 600                  900<br>1500                2200  |
| (4) | 0.5    0.8    0.25<br>0.37   0.75   0.08  |
| (5) | 3214                  34705<br>2830                  657  |
| (6) | 770                  9188<br>3582                1867   |
| (7) | 2895                  2760<br>2046                  18400<br>21160                              |
| (8) | $(400 \div 4) + (36 \div 4)$<br>$= 100 + 9 = 109$   |

| 3   |   |
|-----|---|
| (1) | 24 <u>32</u><br>64 <u>72</u><br>72 <u>80</u>              |
| (2) | $90 + 100 + 500 = 690$<br>$1300 - 800 = 500$              |
| (3) |   |
| (4) | 50%    75%    40%<br>67%    9%    90%                     |
| (5) | 141.94              5674.0<br>48.64              155.16   |
| (6) | 286.8              31.67<br>492.43             254.72     |
| (7) | $(400 \times 5) - (32 \times 5)$<br>$= 2000 - 160 = 1840$ |
| (8) | 0.56              9.52<br>5.9                0.386        |

| 4   |   |
|-----|---|
| (1) | 602,729   |
| (2) | 6000              2000<br><del>32000</del> 11000        |
| (3) | 4                  1<br>4                  9            |
| (4) | 36                  121<br>9                  225       |
| (5) | 190.26              542.21<br>36.7                17.73 |
| (6) | 75.2                94.56<br><del>573.74</del> 45.6     |
| (7) | 1.245<br>215.2    58.32 <u>29.050</u><br>30.295         |
| (8) | $(240 \div 8) - (8 \div 8)$<br>$= 30 - 1 = 29$          |

| 5   |  |
|-----|--|
| (1) | <u>49</u> 56<br><u>28</u> 35<br><u>84</u> 91   |
| (2) | 10's = 90    100's = 200<br>1's = 5      10's = 40                                       |
| (3) | 18                  8<br>18                  24  |
| (4) | $\frac{1}{2}$ $\frac{1}{4}$ $\frac{4}{5}$<br>$\frac{3}{4}$ $\frac{2}{25}$ $\frac{9}{25}$ |
| (5) | 5621                  13947<br>3795                  7146                                |
| (6) | 855                  12680<br>23261                65459                                 |
| (7) | $(600 \times 7) + (90 \times 7) + (4 \times 7)$<br>$= 4200 + 630 + 28$<br>$= 4858$       |
| (8) | 69                  624<br>89                  537r6                                     |

| 6   |   |
|-----|---|
| (1) | $10 = 1, 2, 5, 10$<br>$15 = 1, 3, 5, 15$<br>$24 = 1, 2, 3, 4, 6, 8, 12, 24$ |
| (2) | $360 + 200 + 100 = 660$<br>$4900 - 700 = 4200$                              |
| (3) | $3\frac{3}{4}$ $3\frac{2}{7}$<br>$5\frac{4}{6}$ $4\frac{5}{9}$              |
| (4) | 0.5    0.25    0.66<br>0.4    0.05    0.37                                  |
| (5) | 5382                  4823<br>654                  602                      |
| (6) | 85                  159<br>3912                2963                         |
| (7) | 1544                  4452<br>2313                  51940<br>56392          |
| (8) | $(900 \div 9) + (45 \div 9)$<br>$= 100 + 5 = 105$                           |

| 7   |   |
|-----|---|
| (1) | 48 <u>54</u> 60<br>90 <u>96</u> 102<br>24 <u>30</u> 36  |
| (2) | 2.4                  3.7<br>37.9                60.2  |
| (3) | $\frac{1}{100's} = \frac{4}{10}$ $\frac{1}{100's} = \frac{2}{100}$<br>$\frac{1}{100's} = \frac{8}{100}$ $\frac{1}{10's} = \frac{3}{10}$ |
| (4) | 9                  4<br>8                  12   |
| (5) | 380.19              386.77<br>454.95              26.655  |
| (6) | 254.4              546.21<br>281.38              1171.93  |
| (7) | $(600 \times 6) - (12 \times 6)$<br>$= 3600 - 72 = 3528$  |
| (8) | 0.64              0.248<br>6.2                4.17  |

| 8   |  |
|-----|--|
| (1) | 9.307<br>45.283  |
| (2) | $\frac{2}{3} = \frac{4}{6} = \frac{6}{9}$<br>$\frac{2}{5} = \frac{4}{10} = \frac{6}{15}$ |
| (3) | 0.14                  7.15<br>50.34                23.01                                 |
| (4) | 50%    25%    40%<br>$66\frac{2}{3}\%$ 4% $62\frac{1}{2}\%$                              |
| (5) | 452.24              54.71<br>583.60              20.28                                   |
| (6) | 72.9                  59.6<br>766.87              349.79                                 |
| (7) | 48.42<br>179.0 <u>215.20</u><br>15.52                263.62                              |
| (8) | $(900 \div 9) - (27 \div 9)$<br>$= 100 - 3 = 97$   |

| 9    |   |      |       |      |     |      |  |
|------|---|------|-------|------|-----|------|--|
| (1)  | $\begin{array}{r} 49 \\ 77 \\ 28 \\ \hline \end{array}$   |      |       |      |     |      |  |
| (2)  | $12.2 + 5.8 = 18.0$<br>$14.8 - 9.1 = 5.7$   |      |       |      |     |      |  |
| (3)  | <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;">9</td> <td style="width: 50%; border: none;">27</td> </tr> <tr> <td style="border: none;">25</td> <td style="border: none;">28</td> </tr> </table>  | 9    | 27    | 25   | 28  |      |  |
| 9    | 27  |      |       |      |     |      |  |
| 25   | 28  |      |       |      |     |      |  |
| (4)  | <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;">5</td> <td style="width: 50%; border: none;">0</td> </tr> <tr> <td style="border: none;">-1</td> <td style="border: none;">-3</td> </tr> </table>   | 5    | 0     | -1   | -3  |      |  |
| 5    | 0   |      |       |      |     |      |  |
| -1   | -3  |      |       |      |     |      |  |
| (5)  | <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;">1529</td> <td style="width: 50%; border: none;">3937</td> </tr> <tr> <td style="border: none;">3773</td> <td style="border: none;"></td> </tr> <tr> <td style="border: none;">1794</td> <td style="border: none;"></td> </tr> </table>  | 1529 | 3937  | 3773 |     | 1794 |  |
| 1529 | 3937  |      |       |      |     |      |  |
| 3773 |   |      |       |      |     |      |  |
| 1794 |   |      |       |      |     |      |  |
| (6)  | <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;">3650</td> <td style="width: 50%; border: none;">41025</td> </tr> <tr> <td style="border: none;">4986</td> <td style="border: none;"></td> </tr> <tr> <td style="border: none;">9456</td> <td style="border: none;"></td> </tr> </table> | 3650 | 41025 | 4986 |     | 9456 |  |
| 3650 | 41025   |      |       |      |     |      |  |
| 4986 |   |      |       |      |     |      |  |
| 9456 |   |      |       |      |     |      |  |
| (7)  | $(600 \times 7) + (40 \times 7) + (5 \times 7)$<br>$= 4200 + 280 + 35$<br>$= 4515$  |      |       |      |     |      |  |
| (8)  | <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;">49</td> <td style="width: 50%; border: none;">538</td> </tr> <tr> <td style="border: none;">65</td> <td style="border: none;">639</td> </tr> </table>   | 49   | 538   | 65   | 639 |      |  |
| 49   | 538   |      |       |      |     |      |  |
| 65   | 639   |      |       |      |     |      |  |

| 10               |   |                |                |                |                  |                 |                |
|------------------|---|----------------|----------------|----------------|------------------|-----------------|----------------|
| (1)              | two point three zero seven<br>zero point zero six nine  |                |                |                |                  |                 |                |
| (2)              | $\frac{1}{10}'s = \frac{9}{10}$ $\frac{1}{100}'s = \frac{8}{100}$<br>$\frac{1}{100}'s = \frac{9}{100}$ $\frac{1}{10}'s = \frac{6}{10}$  |                |                |                |                  |                 |                |
| (3)              | <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;"><math>\frac{16}{5}</math></td> <td style="width: 50%; border: none;"><math>\frac{31}{4}</math></td> </tr> <tr> <td style="border: none;"><math>\frac{20}{3}</math></td> <td style="border: none;"><math>\frac{35}{8}</math></td> </tr> </table>   | $\frac{16}{5}$ | $\frac{31}{4}$ | $\frac{20}{3}$ | $\frac{35}{8}$   |                 |                |
| $\frac{16}{5}$   | $\frac{31}{4}$  |                |                |                |                  |                 |                |
| $\frac{20}{3}$   | $\frac{35}{8}$  |                |                |                |                  |                 |                |
| (4)              | <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;"><math>\frac{1}{2}</math></td> <td style="width: 50%; border: none;"><math>\frac{2}{5}</math></td> <td style="width: 50%; border: none;"><math>\frac{3}{4}</math></td> </tr> <tr> <td style="border: none;"><math>\frac{47}{100}</math></td> <td style="border: none;"><math>\frac{16}{25}</math></td> <td style="border: none;"><math>\frac{3}{50}</math></td> </tr> </table> | $\frac{1}{2}$  | $\frac{2}{5}$  | $\frac{3}{4}$  | $\frac{47}{100}$ | $\frac{16}{25}$ | $\frac{3}{50}$ |
| $\frac{1}{2}$    | $\frac{2}{5}$   | $\frac{3}{4}$  |                |                |                  |                 |                |
| $\frac{47}{100}$ | $\frac{16}{25}$   | $\frac{3}{50}$ |                |                |                  |                 |                |
| (5)              | <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;">1848</td> <td style="width: 50%; border: none;">4067</td> </tr> <tr> <td style="border: none;">207</td> <td style="border: none;"></td> </tr> <tr> <td style="border: none;">186</td> <td style="border: none;"></td> </tr> </table>  | 1848           | 4067           | 207            |                  | 186             |                |
| 1848             | 4067  |                |                |                |                  |                 |                |
| 207              |   |                |                |                |                  |                 |                |
| 186              |   |                |                |                |                  |                 |                |
| (6)              | <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;">684</td> <td style="width: 50%; border: none;">1396</td> </tr> <tr> <td style="border: none;">4777</td> <td style="border: none;"></td> </tr> <tr> <td style="border: none;">2335</td> <td style="border: none;"></td> </tr> </table>   | 684            | 1396           | 4777           |                  | 2335            |                |
| 684              | 1396  |                |                |                |                  |                 |                |
| 4777             |   |                |                |                |                  |                 |                |
| 2335             |   |                |                |                |                  |                 |                |
| (7)              | <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;">1076</td> <td style="width: 50%; border: none;">5971</td> </tr> <tr> <td style="border: none;">2934</td> <td style="border: none;">51180</td> </tr> <tr> <td style="border: none;"></td> <td style="border: none;">57151</td> </tr> </table>  | 1076           | 5971           | 2934           | 51180            |                 | 57151          |
| 1076             | 5971  |                |                |                |                  |                 |                |
| 2934             | 51180   |                |                |                |                  |                 |                |
|                  | 57151   |                |                |                |                  |                 |                |
| (8)              | $(1600 \div 8) + (48 \div 8)$<br>$= 200 + 6 = 206$  |                |                |                |                  |                 |                |

| 11     |  |        |        |        |      |        |       |
|--------|--|--------|--------|--------|------|--------|-------|
| (1)    | d = 9<br>k = 8   |        |        |        |      |        |       |
| (2)    | <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;">360</td> <td style="width: 50%; border: none;">260</td> </tr> <tr> <td style="border: none;">1850</td> <td style="border: none;">2400</td> </tr> </table>  | 360    | 260    | 1850   | 2400 |        |       |
| 360    | 260  |        |        |        |      |        |       |
| 1850   | 2400   |        |        |        |      |        |       |
| (3)    | <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;">49</td> <td style="width: 50%; border: none;">81</td> </tr> <tr> <td style="border: none;">144</td> <td style="border: none;">400</td> </tr> </table>  | 49     | 81     | 144    | 400  |        |       |
| 49     | 81   |        |        |        |      |        |       |
| 144    | 400  |        |        |        |      |        |       |
| (4)    | <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;">0.25</td> <td style="width: 50%; border: none;">0.30</td> <td style="width: 50%; border: none;">0.97</td> </tr> <tr> <td style="border: none;">1.24</td> <td style="border: none;">0.04</td> <td style="border: none;">0.005</td> </tr> </table> | 0.25   | 0.30   | 0.97   | 1.24 | 0.04   | 0.005 |
| 0.25   | 0.30   | 0.97   |        |        |      |        |       |
| 1.24   | 0.04   | 0.005  |        |        |      |        |       |
| (5)    | <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;">596.77</td> <td style="width: 50%; border: none;">4835.6</td> </tr> <tr> <td style="border: none;">373.97</td> <td style="border: none;"></td> </tr> <tr> <td style="border: none;">672.4</td> <td style="border: none;"></td> </tr> </table>    | 596.77 | 4835.6 | 373.97 |      | 672.4  |       |
| 596.77 | 4835.6   |        |        |        |      |        |       |
| 373.97 |  |        |        |        |      |        |       |
| 672.4  |  |        |        |        |      |        |       |
| (6)    | <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;">143.18</td> <td style="width: 50%; border: none;">72.87</td> </tr> <tr> <td style="border: none;">63.422</td> <td style="border: none;"></td> </tr> <tr> <td style="border: none;">467.77</td> <td style="border: none;"></td> </tr> </table>    | 143.18 | 72.87  | 63.422 |      | 467.77 |       |
| 143.18 | 72.87  |        |        |        |      |        |       |
| 63.422 |  |        |        |        |      |        |       |
| 467.77 |  |        |        |        |      |        |       |
| (7)    | $(600 \times 8) - (7 \times 8)$<br>$= 4800 - 56 = 4744$  |        |        |        |      |        |       |
| (8)    | <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;">0.73</td> <td style="width: 50%; border: none;">5.29</td> </tr> <tr> <td style="border: none;">8.1</td> <td style="border: none;">47.9</td> </tr> </table>   | 0.73   | 5.29   | 8.1    | 47.9 |        |       |
| 0.73   | 5.29   |        |        |        |      |        |       |
| 8.1    | 47.9   |        |        |        |      |        |       |

| 12               |  |                                 |               |                |                  |               |                                 |
|------------------|--|---------------------------------|---------------|----------------|------------------|---------------|---------------------------------|
| (1)              | 0.0321, 0.329, 3.28,<br>32.4, 326  |                                 |               |                |                  |               |                                 |
| (2)              | $\frac{1}{10}'s = \frac{1}{10}$ $\frac{1}{100}'s = \frac{7}{100}$<br>$\frac{1}{100}'s = \frac{8}{100}$ $\frac{1}{10}'s = \frac{9}{10}$   |                                 |               |                |                  |               |                                 |
| (3)              | <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;"><math>\frac{2}{5}</math></td> <td style="width: 50%; border: none;"><math>\frac{2}{3}</math></td> <td style="width: 50%; border: none;"><math>\frac{1}{20}</math></td> </tr> <tr> <td style="border: none;"><math>\frac{17}{100}</math></td> <td style="border: none;"><math>\frac{3}{4}</math></td> <td style="border: none;"><math>\frac{5}{4}</math> or <math>1\frac{1}{4}</math></td> </tr> </table> | $\frac{2}{5}$                   | $\frac{2}{3}$ | $\frac{1}{20}$ | $\frac{17}{100}$ | $\frac{3}{4}$ | $\frac{5}{4}$ or $1\frac{1}{4}$ |
| $\frac{2}{5}$    | $\frac{2}{3}$  | $\frac{1}{20}$                  |               |                |                  |               |                                 |
| $\frac{17}{100}$ | $\frac{3}{4}$  | $\frac{5}{4}$ or $1\frac{1}{4}$ |               |                |                  |               |                                 |
| (4)              | <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;">600</td> <td style="width: 50%; border: none;">900</td> </tr> <tr> <td style="border: none;">1800</td> <td style="border: none;">1500</td> </tr> </table>  | 600                             | 900           | 1800           | 1500             |               |                                 |
| 600              | 900  |                                 |               |                |                  |               |                                 |
| 1800             | 1500   |                                 |               |                |                  |               |                                 |
| (5)              | <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;">345.45</td> <td style="width: 50%; border: none;">5553.3</td> </tr> <tr> <td style="border: none;">10.42</td> <td style="border: none;"></td> </tr> <tr> <td style="border: none;">246.35</td> <td style="border: none;"></td> </tr> </table>  | 345.45                          | 5553.3        | 10.42          |                  | 246.35        |                                 |
| 345.45           | 5553.3   |                                 |               |                |                  |               |                                 |
| 10.42            |  |                                 |               |                |                  |               |                                 |
| 246.35           |  |                                 |               |                |                  |               |                                 |
| (6)              | <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;">71.50</td> <td style="width: 50%; border: none;">54.64</td> </tr> <tr> <td style="border: none;">457.80</td> <td style="border: none;"></td> </tr> <tr> <td style="border: none;">1625.43</td> <td style="border: none;"></td> </tr> </table>  | 71.50                           | 54.64         | 457.80         |                  | 1625.43       |                                 |
| 71.50            | 54.64  |                                 |               |                |                  |               |                                 |
| 457.80           |  |                                 |               |                |                  |               |                                 |
| 1625.43          |  |                                 |               |                |                  |               |                                 |
| (7)              | <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;">336.5</td> <td style="width: 50%; border: none;">66.69</td> </tr> <tr> <td style="border: none;">31.20</td> <td style="border: none;">444.60</td> </tr> <tr> <td style="border: none;"></td> <td style="border: none;">511.29</td> </tr> </table>  | 336.5                           | 66.69         | 31.20          | 444.60           |               | 511.29                          |
| 336.5            | 66.69  |                                 |               |                |                  |               |                                 |
| 31.20            | 444.60   |                                 |               |                |                  |               |                                 |
|                  | 511.29   |                                 |               |                |                  |               |                                 |
| (8)              | $(700 \div 7) - (35 \div 7)$<br>$= 100 - 5 = 95$   |                                 |               |                |                  |               |                                 |

| 13     |  |        |        |        |         |       |      |
|--------|--|--------|--------|--------|---------|-------|------|
| (1)    | <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;">81</td> <td style="width: 50%; border: none;">90</td> </tr> <tr> <td style="border: none;">45</td> <td style="border: none;">54</td> </tr> <tr> <td style="border: none;">108</td> <td style="border: none;">117</td> </tr> </table>       | 81     | 90     | 45     | 54      | 108   | 117  |
| 81     | 90   |        |        |        |         |       |      |
| 45     | 54   |        |        |        |         |       |      |
| 108    | 117  |        |        |        |         |       |      |
| (2)    | $80 + 200 + 30 = 310$<br>$6300 - 300 = 6000$   |        |        |        |         |       |      |
| (3)    | <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;">0.8</td> <td style="width: 50%; border: none;">9.4</td> </tr> <tr> <td style="border: none;">8.6</td> <td style="border: none;">22.4</td> </tr> </table>   | 0.8    | 9.4    | 8.6    | 22.4    |       |      |
| 0.8    | 9.4  |        |        |        |         |       |      |
| 8.6    | 22.4   |        |        |        |         |       |      |
| (4)    | <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;">25%</td> <td style="width: 50%; border: none;">90%</td> <td style="width: 50%; border: none;">65%</td> </tr> <tr> <td style="border: none;">0.4%</td> <td style="border: none;">8%</td> <td style="border: none;">275%</td> </tr> </table> | 25%    | 90%    | 65%    | 0.4%    | 8%    | 275% |
| 25%    | 90%  | 65%    |        |        |         |       |      |
| 0.4%   | 8%   | 275%   |        |        |         |       |      |
| (5)    | <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;">2726</td> <td style="width: 50%; border: none;">7177</td> </tr> <tr> <td style="border: none;">6266</td> <td style="border: none;"></td> </tr> <tr> <td style="border: none;">7122</td> <td style="border: none;"></td> </tr> </table>     | 2726   | 7177   | 6266   |         | 7122  |      |
| 2726   | 7177   |        |        |        |         |       |      |
| 6266   |  |        |        |        |         |       |      |
| 7122   |  |        |        |        |         |       |      |
| (6)    | <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;">3947</td> <td style="width: 50%; border: none;">26421</td> </tr> <tr> <td style="border: none;">6590</td> <td style="border: none;"></td> </tr> <tr> <td style="border: none;">11654</td> <td style="border: none;"></td> </tr> </table>   | 3947   | 26421  | 6590   |         | 11654 |      |
| 3947   | 26421  |        |        |        |         |       |      |
| 6590   |  |        |        |        |         |       |      |
| 11654  |  |        |        |        |         |       |      |
| (7)    | $(200 \times 9) + (70 \times 9) + (6 \times 9)$<br>$= 1800 + 630 + 54$<br>$= 2484$   |        |        |        |         |       |      |
| (8)    | <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;">142 r1</td> <td style="width: 50%; border: none;">399 r4</td> </tr> <tr> <td style="border: none;">136 r4</td> <td style="border: none;">1150 r7</td> </tr> </table>   | 142 r1 | 399 r4 | 136 r4 | 1150 r7 |       |      |
| 142 r1 | 399 r4   |        |        |        |         |       |      |
| 136 r4 | 1150 r7  |        |        |        |         |       |      |

| 14    |  |      |      |       |       |      |       |
|-------|--|------|------|-------|-------|------|-------|
| (1)   | <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;">17</td> <td style="width: 50%; border: none;">19</td> </tr> <tr> <td style="border: none;">23</td> <td style="border: none;">60</td> </tr> </table>  | 17   | 19   | 23    | 60    |      |       |
| 17    | 19   |      |      |       |       |      |       |
| 23    | 60   |      |      |       |       |      |       |
| (2)   | <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;">3000</td> <td style="width: 50%; border: none;">9000</td> </tr> <tr> <td style="border: none;">12000</td> <td style="border: none;">24000</td> </tr> </table>  | 3000 | 9000 | 12000 | 24000 |      |       |
| 3000  | 9000   |      |      |       |       |      |       |
| 12000 | 24000  |      |      |       |       |      |       |
| (3)   | <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;">42</td> <td style="width: 50%; border: none;">13</td> </tr> <tr> <td style="border: none;">9.6</td> <td style="border: none;">28</td> </tr> </table>   | 42   | 13   | 9.6   | 28    |      |       |
| 42    | 13   |      |      |       |       |      |       |
| 9.6   | 28   |      |      |       |       |      |       |
| (4)   | <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;">5</td> <td style="width: 50%; border: none;">7</td> </tr> <tr> <td style="border: none;">11</td> <td style="border: none;">20</td> </tr> </table>  | 5    | 7    | 11    | 20    |      |       |
| 5     | 7  |      |      |       |       |      |       |
| 11    | 20   |      |      |       |       |      |       |
| (5)   | <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;">3750</td> <td style="width: 50%; border: none;">6489</td> </tr> <tr> <td style="border: none;">158</td> <td style="border: none;"></td> </tr> <tr> <td style="border: none;">2825</td> <td style="border: none;"></td> </tr> </table>        | 3750 | 6489 | 158   |       | 2825 |       |
| 3750  | 6489   |      |      |       |       |      |       |
| 158   |  |      |      |       |       |      |       |
| 2825  |  |      |      |       |       |      |       |
| (6)   | <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;">4860</td> <td style="width: 50%; border: none;">4925</td> </tr> <tr> <td style="border: none;">9997</td> <td style="border: none;"></td> </tr> <tr> <td style="border: none;">4947</td> <td style="border: none;"></td> </tr> </table>       | 4860 | 4925 | 9997  |       | 4947 |       |
| 4860  | 4925   |      |      |       |       |      |       |
| 9997  |  |      |      |       |       |      |       |
| 4947  |  |      |      |       |       |      |       |
| (7)   | <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;">3928</td> <td style="width: 50%; border: none;">5642</td> </tr> <tr> <td style="border: none;">4470</td> <td style="border: none;">24180</td> </tr> <tr> <td style="border: none;"></td> <td style="border: none;">29822</td> </tr> </table> | 3928 | 5642 | 4470  | 24180 |      | 29822 |
| 3928  | 5642   |      |      |       |       |      |       |
| 4470  | 24180  |      |      |       |       |      |       |
|       | 29822  |      |      |       |       |      |       |
| (8)   | $(900 \div 9) + (63 \div 9)$<br>$= 100 + 7 = 107$  |      |      |       |       |      |       |

| 15                              |  |                                 |                  |               |                |               |                 |
|---------------------------------|--|---------------------------------|------------------|---------------|----------------|---------------|-----------------|
| (1)                             | <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;">40</td> <td style="width: 50%; border: none;">48</td> </tr> <tr> <td style="border: none;">112</td> <td style="border: none;">120</td> </tr> <tr> <td style="border: none;">80</td> <td style="border: none;">88</td> </tr> </table>   | 40                              | 48               | 112           | 120            | 80            | 88              |
| 40                              | 48   |                                 |                  |               |                |               |                 |
| 112                             | 120  |                                 |                  |               |                |               |                 |
| 80                              | 88   |                                 |                  |               |                |               |                 |
| (2)                             | $1's = 9$ $100's = 300$<br>$\frac{1}{100}'s = \frac{5}{100}$ $\frac{1}{10}'s = \frac{7}{10}$   |                                 |                  |               |                |               |                 |
| (3)                             | <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;">4.2</td> <td style="width: 50%; border: none;">1.9</td> </tr> <tr> <td style="border: none;">0.12</td> <td style="border: none;">16.4</td> </tr> </table>  | 4.2                             | 1.9              | 0.12          | 16.4           |               |                 |
| 4.2                             | 1.9  |                                 |                  |               |                |               |                 |
| 0.12                            | 16.4   |                                 |                  |               |                |               |                 |
| (4)                             | <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;"><math>\frac{6}{10}</math> or <math>\frac{3}{5}</math></td> <td style="width: 50%; border: none;"><math>\frac{17}{100}</math></td> <td style="width: 50%; border: none;"><math>\frac{1}{3}</math></td> </tr> <tr> <td style="border: none;"><math>\frac{2}{25}</math></td> <td style="border: none;"><math>\frac{3}{4}</math></td> <td style="border: none;"><math>\frac{1}{200}</math></td> </tr> </table> | $\frac{6}{10}$ or $\frac{3}{5}$ | $\frac{17}{100}$ | $\frac{1}{3}$ | $\frac{2}{25}$ | $\frac{3}{4}$ | $\frac{1}{200}$ |
| $\frac{6}{10}$ or $\frac{3}{5}$ | $\frac{17}{100}$   | $\frac{1}{3}$                   |                  |               |                |               |                 |
| $\frac{2}{25}$                  | $\frac{3}{4}$  | $\frac{1}{200}$                 |                  |               |                |               |                 |
| (5)                             | <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;">378.70</td> <td style="width: 50%; border: none;">604.51</td> </tr> <tr> <td style="border: none;">290.36</td> <td style="border: none;"></td> </tr> <tr> <td style="border: none;">219.7</td> <td style="border: none;"></td> </tr> </table>  | 378.70                          | 604.51           | 290.36        |                | 219.7         |                 |
| 378.70                          | 604.51   |                                 |                  |               |                |               |                 |
| 290.36                          |  |                                 |                  |               |                |               |                 |
| 219.7                           |  |                                 |                  |               |                |               |                 |
| (6)                             | <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;">539.16</td> <td style="width: 50%; border: none;">3188.4</td> </tr> <tr> <td style="border: none;">76.436</td> <td style="border: none;"></td> </tr> <tr> <td style="border: none;">461.36</td> <td style="border: none;"></td> </tr> </table>   | 539.16                          | 3188.4           | 76.436        |                | 461.36        |                 |
| 539.16                          | 3188.4   |                                 |                  |               |                |               |                 |
| 76.436                          |  |                                 |                  |               |                |               |                 |
| 461.36                          |  |                                 |                  |               |                |               |                 |
| (7)                             | $(700 \times 6) + (9 \times 6)$<br>$= 4200 + 54 = 4254$  |                                 |                  |               |                |               |                 |
| (8)                             | <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;">0.86</td> <td style="width: 50%; border: none;">3.46</td> </tr> <tr> <td style="border: none;">15.7</td> <td style="border: none;">0.672</td> </tr> </table>   | 0.86                            | 3.46             | 15.7          | 0.672          |               |                 |
| 0.86                            | 3.46   |                                 |                  |               |                |               |                 |
| 15.7                            | 0.672  |                                 |                  |               |                |               |                 |

| 16              |   |                 |                 |                 |                 |        |        |
|-----------------|---|-----------------|-----------------|-----------------|-----------------|--------|--------|
| (1)             | $260 + 110 + 90 = 460$<br>$6800 - 500 = 6300$   |                 |                 |                 |                 |        |        |
| (2)             | <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;">560</td> <td style="width: 50%; border: none;">2340</td> </tr> <tr> <td style="border: none;">340</td> <td style="border: none;">13600</td> </tr> </table>  | 560             | 2340            | 340             | 13600           |        |        |
| 560             | 2340  |                 |                 |                 |                 |        |        |
| 340             | 13600   |                 |                 |                 |                 |        |        |
| (3)             | <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;"><math>\frac{3^4}{5}</math></td> <td style="width: 50%; border: none;"><math>\frac{4^5}{8}</math></td> </tr> <tr> <td style="border: none;"><math>\frac{4^3}{6}</math></td> <td style="border: none;"><math>\frac{5^3}{9}</math></td> </tr> </table> | $\frac{3^4}{5}$ | $\frac{4^5}{8}$ | $\frac{4^3}{6}$ | $\frac{5^3}{9}$ |        |        |
| $\frac{3^4}{5}$ | $\frac{4^5}{8}$   |                 |                 |                 |                 |        |        |
| $\frac{4^3}{6}$ | $\frac{5^3}{9}$   |                 |                 |                 |                 |        |        |
| (4)             | 30 pupils   |                 |                 |                 |                 |        |        |
| (5)             | <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;">380.55</td> <td style="width: 50%; border: none;">5539.9</td> </tr> <tr> <td style="border: none;">299.11</td> <td style="border: none;"></td> </tr> <tr> <td style="border: none;">134.72</td> <td style="border: none;"></td> </tr> </table>      | 380.55          | 5539.9          | 299.11          |                 | 134.72 |        |
| 380.55          | 5539.9  |                 |                 |                 |                 |        |        |
| 299.11          |   |                 |                 |                 |                 |        |        |
| 134.72          |   |                 |                 |                 |                 |        |        |
| (6)             | <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;">143.95</td> <td style="width: 50%; border: none;">504.64</td> </tr> <tr> <td style="border: none;">670.04</td> <td style="border: none;"></td> </tr> <tr> <td style="border: none;">771.52</td> <td style="border: none;"></td> </tr> </table>      | 143.95          | 504.64          | 670.04          |                 | 771.52 |        |
| 143.95          | 504.64  |                 |                 |                 |                 |        |        |
| 670.04          |   |                 |                 |                 |                 |        |        |
| 771.52          |   |                 |                 |                 |                 |        |        |
| (7)             | <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;">33.90</td> <td style="width: 50%; border: none;">1.148</td> </tr> <tr> <td style="border: none;">348.8</td> <td style="border: none;">51.660</td> </tr> <tr> <td style="border: none;"></td> <td style="border: none;">52.808</td> </tr> </table>   | 33.90           | 1.148           | 348.8           | 51.660          |        | 52.808 |
| 33.90           | 1.148   |                 |                 |                 |                 |        |        |
| 348.8           | 51.660  |                 |                 |                 |                 |        |        |
|                 | 52.808  |                 |                 |                 |                 |        |        |
| (8)             | $(900 \div 9) - (27 \div 9)$<br>$= 100 - 3 = 97$  |                 |                 |                 |                 |        |        |

| 17  |   |                                      |                  |
|-----|---|--------------------------------------|------------------|
| (1) | 36<br>72<br>108   | <u>45</u><br><u>81</u><br><u>117</u> | 54<br>90<br>126  |
| (2) | 60.9<br>9.8   |                                      | 5.4<br>78.0      |
| (3) | $1\frac{4}{7}$<br>$9\frac{1}{8}$  |                                      |                  |
| (4) | 0.5<br>0.75   | 0.4<br>0.7                           | 0.66̇<br>0.03    |
| (5) | 9793<br>2935<br>5188  |                                      | 56740            |
| (6) | 2868<br>49243<br>29423  |                                      | 23167            |
| (7) | $(400 \times 8) + (0 \times 8) + (9 \times 8)$<br>$= 3200 + 0 + 72$<br>$= 3272$ |                                      |                  |
| (8) | 98 r4<br>197 r3   |                                      | 342 r4<br>511 r8 |

| 18  |  |  |  |
|-----|--|--|--|
| (1) | 100.208<br>67.0095   |  |  |
| (2) | $\frac{3}{5} = \frac{6}{10} = \frac{9}{15}$<br>$\frac{2}{7} = \frac{4}{14} = \frac{6}{21}$ |  |  |
| (3) | 0.06<br>45.01  |  | 3.96<br>2.34                                   |
| (4) | <u>8</u> :12<br><u>4</u> :32   |  | <u>5</u> :4<br><u>4</u> :3                     |
| (5) | 72<br>2801<br>765  |  | 54221  |
| (6) | 754<br>57374<br>4560   |  | 9456   |
| (7) | 1904<br>4653   |  | <u>42357</u><br><u>121020</u><br><u>163377</u> |
| (8) | $(400 \div 8) + (24 \div 8)$<br>$= 50 + 3 = 53$  |  |  |

| 19  |   |                                      |                      |
|-----|---|--------------------------------------|----------------------|
| (1) | 81<br>45<br>108   | <u>90</u><br><u>54</u><br><u>117</u> |                      |
| (2) | 40.3 + 8.7 = 49.0<br>32.5 - 7.3 = 25.2                    |                                      |                      |
| (3) | 26.5<br>0.0348  |                                      | 7.36<br>0.412        |
| (4) | -1<br>-3  |                                      | 5<br>-7              |
| (5) | 152.92<br>884.11<br>105.724                               |                                      | 3617.63              |
| (6) | 124.5<br>37.77<br>2702.29                                 |                                      | 516.5                |
| (7) | $(900 \times 9) - (45 \times 9)$<br>$= 8100 - 405 = 7695$ |                                      |                      |
| (8) | 1.29 r3<br>29.1 r2  |                                      | 16.02 r2<br>0.936 r5 |

| 20  |  |                          |                                   |
|-----|--|--------------------------|-----------------------------------|
| (1) | one point zero two three<br>forty point nine six one   |                          |                                   |
| (2) | $\frac{1}{10}$ 's = $\frac{7}{10}$ $\frac{1}{100}$ 's = $\frac{8}{100}$<br>100's = 100   1's = 9 |                          |                                   |
| (3) | $\frac{27}{8}$<br>$\frac{29}{5}$   |                          | $\frac{40}{9}$<br>$\frac{68}{11}$ |
| (4) | 25%<br>87.5%   | 33 $\frac{1}{3}$ %<br>5% | 75%<br>3%                         |
| (5) | 2.783<br>261.67<br>125.73  |                          | 3470.5                            |
| (6) | 30.344<br>123.48<br>2137.594   |                          | 91.88                             |
| (7) | 2.445<br>1.422   |                          | 0.4712<br><u>2.3560</u><br>2.8272 |
| (8) | $(240 \div 8) - (8 \div 8)$<br>$= 30 - 1 = 29$   |                          |                                   |

| 21  |   |                |  |
|-----|---|----------------|--|
| (1) | 5620<br>3400                              |                | 1200<br>79                                   |
| (2) | 230 + 90 + 400 = 720<br>6500 - 800 = 5700 |                |  |
| (3) | 12<br>15                                  | $\frac{9}{20}$ |  |
| (4) | 0.7<br>4.2                                | 0.39<br>0.08   | 0.009<br>0.66̇                               |
| (5) | 10180<br>41604<br>20150                   |                | 39377  |
| (6) | 729<br>32839<br>3476                      |                | 5596   |
| (7) | 28756<br>17670                            |                | <u>15057</u><br><u>50190</u><br><u>65247</u> |
| (8) | 136 r1<br>179 r3                          |                | 1316 r1<br>785 r3                            |

| 22  |  |                                 |                                   |
|-----|--|---------------------------------|-----------------------------------|
| (1) | 69<br>58   |                                 | 87<br>35                          |
| (2) | 25<br>1000   |                                 | 121<br>81                         |
| (3) | $\frac{1}{3}$<br>$\frac{1}{25}$  | $\frac{4}{5}$<br>$1\frac{1}{2}$ | $\frac{3}{4}$<br>$\frac{43}{100}$ |
| (4) | 3.9<br>21.5  |                                 | 9.1<br>6.1                        |
| (5) | 3214<br>2830<br>657  |                                 | 34705                             |
| (6) | 2637<br>38408<br>150925  |                                 | 47421                             |
| (7) | $(400 \times 7) + (50 \times 7) + (3 \times 7)$<br>$= 2800 + 350 + 21$<br>$= 3171$ |                                 |                                   |
| (8) | $(900 \div 9) + (27 \div 9)$<br>$= 100 + 3 = 103$                                  |                                 |                                   |

| 23  |  |                            |                                      |
|-----|--|----------------------------|--------------------------------------|
| (1) | 24.5<br>0.8934                                   |                            | 0.0576<br>1.047                      |
| (2) | 4.8<br>2.7                                       |                            | 2.6<br>0.32                          |
| (3) | 2000<br>0.02                                     |                            | 70000<br>0.005                       |
| (4) | 23%<br>45%                                       | 66 $\frac{2}{3}$ %<br>350% | 8%<br>70%                            |
| (5) | 119.453<br>262.68<br>6950.79                     |                            | 219.47                               |
| (6) | 652.27<br>391.2<br>198.24                        |                            | 341.59                               |
| (7) | 1.140<br>4.3078                                  |                            | 0.04311<br><u>0.23950</u><br>0.28261 |
| (8) | $(700 \div 7) - (35 \div 7)$<br>$= 100 - 5 = 95$ |                            |                                      |

| 24  |   |  |  |
|-----|---|--|--|
| (1) | $1\frac{1}{4}$<br>$2\frac{1}{5}$                          |  | $6\frac{5}{9}$<br>$5\frac{5}{6}$                   |
| (2) | 5<br>5  |  | 4<br>-17   |
| (3) | $\frac{3}{4}$<br>$\frac{1}{2}$                            |  | $1\frac{1}{12}$<br>$\frac{5}{10}$ or $\frac{1}{2}$ |
| (4) | 125<br>80   |  | 28<br>180  |
| (5) | 190.26<br>36.7<br>17.73                                   |  | 542.21   |
| (6) | 312.8<br>801.63<br>144.72                                 |  | 76.13  |
| (7) | $(500 \times 5) - (25 \times 5)$<br>$= 2500 - 125 = 2375$ |  |  |
| (8) | 9.3 r3<br>2.23 r1   |  | 0.634 r2<br>11.77 r4                               |

| 25  |   |                            |
|-----|---|----------------------------|
| (1) | 4.64<br>20.11   | 3.72<br>9.12               |
| (2) | $\frac{12}{48} = \frac{6}{24} = \frac{3}{12}$<br>$\frac{18}{54} = \frac{9}{27} = \frac{3}{9}$ |                            |
| (3) | 0.15<br>8.72  | 0.7<br>3.24                |
| (4) | 33 $\frac{1}{3}$ % 60% 90%<br>3% 7.5% 87.5%   |                            |
| (5) | 4468<br>1021<br>4760  | 11763                      |
| (6) | 1310<br>2862<br>4657  | 6828                       |
| (7) | 3975<br>2478  | $\frac{580}{8700}$<br>9280 |
| (8) | 288<br>206  | 345<br>716                 |

| 26  |   |                    |
|-----|---|--------------------|
| (1) | $d = 7^3/7$<br>$k = 9^6/8$  |                    |
| (2) | $7/6$ or $1^1/6$<br>$4/9$   | $1^3/20$<br>$2/15$ |
| (3) | $5 \times 6 + 13 = 43$<br>$9 + 7 \times 4 = 37$<br>$31 - 2 \times 9 = 13$<br>$56 \div 8 + 9 = 16$ |                    |
| (4) | $3^5/6$<br>$8^4/8$  | $4^5/8$<br>$8^3/9$ |
| (5) | 3220<br>2785<br>657   | 37531              |
| (6) | 1254<br>12552<br>17464  | 4845               |
| (7) | $(300 \times 4) + (80 \times 4) + (4 \times 4)$<br>$= 1200 + 320 + 16$<br>$= 1536$                |                    |
| (8) | $(300 \div 4) + (76 \div 4)$<br>$= 75 + 19 = 94$  |                    |

| 27  |  |   |
|-----|--|---|
| (1) | $1/10's = 6/10$ $1/1000's = 4/1000$<br>$1/100's = 4/100$ $10's = 30$ |   |
| (2) | 240000<br>0.032  | 3500<br>0.071                                     |
| (3) | <u>32:40</u><br><u>30:42</u>   | <u>9:8</u><br><u>8:3</u>                          |
| (4) | 23000<br>0.000064  | 1820<br>0.0438                                    |
| (5) | 142.03<br>48.64<br>147.26  | 5674.0  |
| (6) | 399.2<br>556.01<br>459.6   | 104.56  |
| (7) | 154.0<br>43.74   | $\frac{1.542}{35.980}$<br>$\frac{37.522}{37.522}$ |
| (8) | $(240 \div 8) - (16 \div 8)$<br>$= 30 - 2 = 28$                      |   |

| 28  |  |  |
|-----|--|--|
| (1) | $d = 11^6/7$<br>$k = 12^5/8$                             |  |
| (2) | $6.1 \times 10^5$<br>$7.92 \times 10^{-2}$               | $3.4 \times 10^{-5}$<br>$5.18 \times 10^6$ |
| (3) | 270km<br>450km<br>135km                                  |  |
| (4) | $1/2$<br>$3/4$   | $12/25$<br>$2/3$                           |
| (5) | 190.26<br>36.79<br>17.91                                 | 542.21                                     |
| (6) | 306.8<br>528.43<br>223.72                                | 51.56                                      |
| (7) | $(400 \times 5) - (14 \times 5)$<br>$= 2000 - 70 = 1930$ |  |
| (8) | 0.66<br>4.9  | 8.52<br>0.286                              |

| 29  |                          |                               |
|-----|--------------------------|-------------------------------|
| (1) | 57<br>43                 | 75<br>100                     |
| (2) | <u>3:2</u><br><u>1:8</u> | <u>7:9</u><br><u>8:15</u>     |
| (3) | 5600<br>0.00081          | 630000<br>0.00905             |
| (4) | 0.5<br>0.66              | 0.4<br>0.7                    |
| (5) | 5621<br>3795<br>7146     | 13947                         |
| (6) | 148<br>3930<br>3037      | 161                           |
| (7) | 7448<br>6768             | $\frac{1644}{19180}$<br>20824 |
| (8) | 79<br>79                 | 724<br>937 r6                 |

| 30  |  |  |
|-----|--|--|
| (1) | $4.5 \times 10^7$<br>$5.92 \times 10^{-4}$   | $6.3 \times 10^{-3}$<br>$6.74 \times 10^5$ |
| (2) | 3.6<br>1.6   | 4.3<br>5.4                                 |
| (3) | \$33.20<br>\$8.30<br>\$20.75   |  |
| (4) | $6 \times 7 + 9 = 51$<br>$17 + 32 \div 4 = 25$<br>$80 - 5 \times 4 = 60$<br>$22 + 8 \times 3 = 46$ |  |
| (5) | 5382<br>654<br>602   | 4823                                       |
| (6) | 855<br>24171<br>65559  | 15380                                      |
| (7) | $(500 \times 7) + (80 \times 7) + (3 \times 7)$<br>$= 3500 + 560 + 21$<br>$= 4081$                 |  |
| (8) | $(900 \div 9) + (54 \div 9)$<br>$= 100 + 6 = 106$  |  |

| 31  |  |                                  |
|-----|--|----------------------------------|
| (1) | 4<br>47  | <u>32</u><br><u>12</u>           |
| (2) | \$45<br>\$7                                      | \$63<br>\$8                      |
| (3) | 7<br>15  | 12<br>20                         |
| (4) | $1/4$<br>$9/10$                                  | $3/5$<br>$1/3$                   |
| (5) | 380.19<br>454.95<br>26.655                       | 386.77                           |
| (6) | 72.9<br>564.87<br>349.79                         | 59.6                             |
| (7) | 291.5<br>752.8                                   | $\frac{34.65}{154.00}$<br>188.65 |
| (8) | $(900 \div 9) - (18 \div 9)$<br>$= 100 - 2 = 98$ |                                  |

| 32  |   |                  |
|-----|---|------------------|
| (1) | 37<br>46  | 25<br>120        |
| (2) | 81<br>1000  | 49<br>625        |
| (3) | $3/4$<br>$2/3$  | $2/5$<br>$1^1/4$ |
| (4) | 5.0<br>12.7   | 7.2<br>32.8      |
| (5) | 452.24<br>583.6<br>20.28                                | 54.71            |
| (6) | 354.4<br>181.38<br>2171.93                              | 546.21           |
| (7) | $(600 \times 6) - (4 \times 6)$<br>$= 3600 - 24 = 3576$ |                  |
| (8) | 0.74<br>5.2   | 0.448<br>3.18    |



| 33  |                      |                               |             |
|-----|----------------------|-------------------------------|-------------|
| (1) | $13/5$<br>$61/8$     | $62/9$<br>$29/3$              |             |
| (2) | 0.8<br>1.8           | 26<br>10.2                    |             |
| (3) | 60000<br>0.09        | 900<br>0.006                  |             |
| (4) | 67%<br>75%           | $33\frac{1}{3}\%$<br>5%       | 95%<br>120% |
| (5) | 1529<br>3773<br>1794 | 3937                          |             |
| (6) | 864<br>4687<br>2425  | 1396                          |             |
| (7) | 3704<br>5607         | 4081<br><u>34980</u><br>39061 |             |
| (8) | 39<br>76             | 527<br>659                    |             |

| 34  |  |                         |              |
|-----|--|-------------------------|--------------|
| (1) | 0.33<br>30.11  | 0.06<br>140.28          |              |
| (2) | 0.68<br>1.24   | 5.2<br>0.42             |              |
| (3) | $1\frac{1}{4}$<br>$3/6$  | $1\frac{3}{6}$<br>$5/8$ |              |
| (4) | 0.4<br>0.05  | 0.75<br>0.9             | 0.875<br>1.5 |
| (5) | 1848<br>207<br>186   | 4067                    |              |
| (6) | 3650<br>4986<br>9456   | 41136                   |              |
| (7) | $(700 \times 7) + (50 \times 7) + (6 \times 7)$<br>$= 4900 + 350 + 42$<br>$= 5292$ |                         |              |
| (8) | $(1600 \div 8) + (64 \div 8)$<br>$= 200 + 8 = 208$                                 |                         |              |

| 35  |  |                                  |             |
|-----|--|----------------------------------|-------------|
| (1) | $d = 6\frac{1}{4}$<br>$k = 9\frac{4}{5}$         |                                  |             |
| (2) | 17<br>42   | $\frac{52}{16}$                  |             |
| (3) | 0.85<br>3.6                                      | 0.32<br>2.8                      |             |
| (4) | 0.65<br>0.8                                      | 0.08<br>0.33                     | 0.37<br>1.5 |
| (5) | 596.77<br>373.97<br>672.4                        | 4835.6                           |             |
| (6) | 83.5<br>478.73<br>1662.53                        | 52.64                            |             |
| (7) | 36.8<br>72.24                                    | $\frac{37.53}{250.20}$<br>287.73 |             |
| (8) | $(700 \div 7) - (28 \div 7)$<br>$= 100 - 4 = 96$ |                                  |             |

| 36  |   |                                  |
|-----|---|----------------------------------|
| (1) | 360km<br>630km<br>202.5km   |                                  |
| (2) | $\frac{24}{48} = \frac{12}{24} = \frac{6}{12}$<br>$\frac{32}{72} = \frac{16}{36} = \frac{8}{18}$    |                                  |
| (3) | $6 \times 3 + 11 = 29$<br>$36 - 6 \times 4 = 12$<br>$45 - 7 \times 4 = 17$<br>$21 - 56 \div 8 = 14$ |                                  |
| (4) | $7\frac{3}{6}$<br>$4\frac{3}{9}$  | $7\frac{1}{7}$<br>$7\frac{7}{8}$ |
| (5) | 345.45<br>10.42<br>246.35   | 5553.3                           |
| (6) | 153.18<br>73.422<br>467.77  | 72.87                            |
| (7) | $(600 \times 8) - (15 \times 8)$<br>$= 4800 - 120 = 4680$   |                                  |
| (8) | 0.83<br>9.1   | 7.29<br>77.9                     |

| 37  |   |                               |
|-----|---|-------------------------------|
| (1) | $d = 4\frac{7}{8}$<br>$k = 13\frac{1}{7}$ |                               |
| (2) | $1\frac{2}{4}$<br>$5/8$                   | $1\frac{7}{15}$<br>$1/12$     |
| (3) | <u>20:32</u><br><u>9:3</u>                | <u>14:18</u><br><u>54:30</u>  |
| (4) | 12000<br>0.0034                           | 570000<br>0.065               |
| (5) | 2727<br>6336<br>7122                      | 7177                          |
| (6) | 4832<br>10041<br>4958                     | 4925                          |
| (7) | 3316<br>2850                              | 4256<br><u>18240</u><br>22490 |
| (8) | 162 r1<br>156 r4                          | 397 r5<br>1152 r1             |

| 38  |  |                             |           |
|-----|--|-----------------------------|-----------|
| (1) | 2<br>58  | 16<br>21                    |           |
| (2) | 450000<br>0.0064   | 95000<br>0.11               |           |
| (3) | 400km<br>360km<br>300km  |                             |           |
| (4) | 75%<br>5%  | 66 $\frac{2}{3}$ %<br>87.5% | 40%<br>6% |
| (5) | 3750<br>158<br>2825  | 6489                        |           |
| (6) | 4947<br>6590<br>12654  | 26205                       |           |
| (7) | $(200 \times 9) + (70 \times 9) + (9 \times 9)$<br>$= 1800 + 630 + 81$<br>$= 2511$ |                             |           |
| (8) | $(900 \div 9) + (27 \div 9)$<br>$= 100 + 3 = 103$                                  |                             |           |

| 39  |   |  |
|-----|---|--|
| (1) | $7\frac{11}{12}$<br>$3/8$   | $8\frac{1}{4}$<br>$1\frac{5}{6}$           |
| (2) | $9.6 \times 10^5$<br>$5.1 \times 10^{-3}$   | $7.2 \times 10^{-3}$<br>$1.45 \times 10^8$ |
| (3) | 2300<br>0.00014   | 93000<br>0.052                             |
| (4) | $32 \div 8 + 16 = 20$<br>$16 + 4 \times 5 = 36$<br>$7 \times 8 + 9 = 65$<br>$7 \times 6 - 4 \times 9 = 6$ |  |
| (5) | 378.7<br>290.35<br>219.7  | 604.51                                     |
| (6) | 161.95<br>670.04<br>1771.52   | 504.64                                     |
| (7) | 39.3<br>507.2   | 1.49<br><u>67.05</u><br>68.54              |
| (8) | $(400 \div 8) - (32 \div 8)$<br>$= 50 - 4 = 46$   |  |

| 40  |  |  |              |
|-----|--|--|--------------|
| (1) | $3.6 \times 10^4$<br>$1.48 \times 10^{-4}$               | $4.59 \times 10^{-3}$<br>$7.0 \times 10^7$ |              |
| (2) | <u>7:3</u><br><u>20:45</u>                               | <u>63:45</u><br><u>4:3</u>                 |              |
| (3) | \$37.20<br>\$9.30<br>\$23.25                             |  |              |
| (4) | 0.66<br>0.02   | 0.6<br>0.007                               | 0.05<br>1.25 |
| (5) | 380.55<br>299.11<br>154.72                               | 5539.9                                     |              |
| (6) | 529.16<br>85.576<br>461.36                               | 3188.4                                     |              |
| (7) | $(600 \times 6) - (14 \times 6)$<br>$= 3600 - 84 = 3516$ |  |              |
| (8) | 0.96<br>17.9   | 8.46<br>0.572                              |              |