Written in NZ for NZ

Help Me at HOME Series

Data Projector version of ... Book 8 (AH8a)

40x Number Knowledge Worksheets

This resource supports the

Numeracy Professional Development Project

Stages 6 to 8

AWS Publications Ltd

AWS

Number Knowledge Revision

Home Page

Information about what is covered within this resource ...

Click on the worksheet number you require ...

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31	32	33	34	35	36	37	38	39	40

AWS Number Knowledge Revision

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;

Number Knowledge Revision

* 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
  = _____ , 24.75 + _____ + 69
  = 130.45 *etc.*

- Using appropriate **number strategies** to revise **multiplication and division facts** up to 10 x 10.
  Example:
  368 x 5 = (_____ x _____) - (_____ x _____) *etc.*

AWS Number Knowledge Revision

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;

Number Knowledge Revision

* 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 x 10.

  Example:

  695 x 8 = (_____ x _____) - (_____ x _____) *etc.*

AWS Number Knowledge Revision

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;

Number Knowledge Revision

* 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.

AWS Number Knowledge Revision

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;

AWS Number Knowledge Revision

* 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, _____,

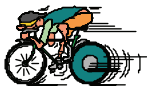
81, _____, _____, _____, _____, _____, 135

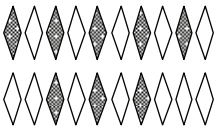
(2) **Round** these numbers to the **nearest 10**.

231 = _____ 683 = _____

1465 = _____ 3249 = _____

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





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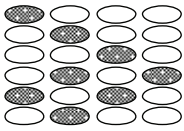


_____

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

fraction	decimal	percentage
$^1/_4$		
		60%
	0.7	

(5) **Adding** large numbers.

3143 + 732 + 13 = _____

471 + 26 + 534 = _____

72 + 494 + 4124 = _____

252
63
10936
+ 512
_____
_____

(6) **Subtracting** large numbers.

1298 - 53 = _____

13427 - 965 = _____

27385 - 3621 = _____

5647
- 482
_____

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

Example: 231 x 3 = (200 x 3) + (30 x 3) + (1 x 3) = 600 + 90 + 3 = 693

348 x 4 = (_____ x ___) + (___ x ___) + (___ x ___)

= _____ + _____ + _____ = _____

(8) **Dividing** large numbers.

$2\overline{)756}$ $5\overline{)1275}$

$3\overline{)612}$ $4\overline{)2684}$

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

9, 18, 27, 36, 45, 54, 63, 70,

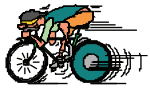
81, 90, 99, 108, 117, 126, 135

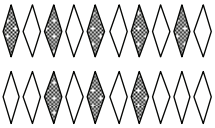
(2) **Round** these numbers to the **nearest 10**.

231 = 230 683 = 680

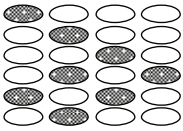
1465 = 1470 3249 = 3250

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





$^{2}/_{5}$



$^{1}/_{3}$

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

fraction	decimal	percentage
$^{1}/_{4}$	0.25	25%
$^{2}/_{5}$	0.6	60%
$^{7}/_{10}$	0.7	70%

(5) **Adding** large numbers.

3143 + 732 + 13 = 3888

471 + 26 + 534 = 1031

72 + 494 + 4124 = 4690

```
  252
   63
10936
+  512
-----
11763
```

(6) **Subtracting** large numbers.

1298 - 53 = 1245

13427 - 965 = 12462

27385 - 3621 = 23764

```
 5647
- 482
-----
 5165
```

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

Example: 231 x 3 = (200 x 3) + (30 x 3) + (1 x 3) = 600 + 90 + 3 = 693

348 x 4 = (300 x 4) + (40 x 4) + (8 x 4)

= 1200 + 160 + 32 = 1392

(8) **Dividing** large numbers.

```
  378
2)756
  204
3)612
```

```
  255
5)1275
  671
4)2684
```

(1) **Write** these numbers in order from **smallest** to **largest**. **Underline** the **even** numbers.

0.25
2.06
2
20.04
0.029

_____ , _____ , _____ , _____ , _____

(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 = _____

535 + _____ + 47 = 3412

41 + 972 + _____ = 1670

```
  1675
    81
 32523
+  426
------
```

(6) **Subtracting** large numbers.

3286 - _____ = 2516

_____ - 2608 = 974

21573 - _____ = 19706

```
 15539
-
------
  6351
```

(7) **Multiplying** whole numbers.

```
  579        341        920
x   5      x   6      x  23
-----      -----      -----
```

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

Example: 145 ÷ 5 = (100 ÷ 5) + (45 ÷ 5) = 20 + 9 = 29

436 ÷ 4 = (_____ ÷ _____) + (_____ ÷ _____)

= _____ + _____ = _____

(1) **Write** these numbers in order from **smallest** to **largest**. **Underline** the **even** numbers.

0.25
2.06
2
20.04
0.029

0.029 , 0.25 , 2 , 2.06 , 20.04

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

2 = **2,4,6,8,10** 5 = **5,10,15,20,25**

7 = **7,14,21,28,35** 10 = **10,20,30,40,50**

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

563 = **600** 946 = **900**

1470 = **1500** 2150 = **2200**

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

50% = **0.5** 80% = **0.8** 25% = **0.25**

37% = **0.37** 75% = **0.75** 8% = **0.08**

(5) **Adding** large numbers.

462 + 14 + 2738 = **3214**

535 + **2830** + 47 = 3412

41 + 972 + **657** = 1670

```
  1675
    81
 32523
+  426
------
 34705
```

(6) **Subtracting** large numbers.

3286 - **77** = 2516

3582 - 2608 = 974

21573 - **1867** = 19706

```
 15539
- 9188
------
  6351
```

(7) **Multiplying** whole numbers.

```
  579        341        920
  x 5        x 6        x 23
------     ------     ------
 2895       2046       2760
                      18400
                      ------
                      21160
```

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

Example: 145 ÷ 5 = (100 ÷ 5) + (45 ÷ 5) = 20 + 9 = 29

436 ÷ 4 = (**400** ÷ **4**) + (**36** ÷ **4**)

= **100** + **9** = **109**

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

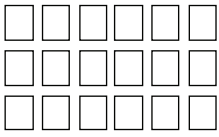
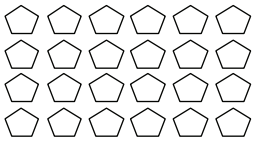
24, _____ 64, _____ 72, _____

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

89 + 104 + 493 = _____ + _____ + _____ = _____

1308 - 783 = _____ - _____ = _____

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

$\frac{2}{3}$  $\frac{5}{6}$ 

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

0.5 = _____ 0.75 = _____ 0.4 = _____

0.67 = _____ 0.09 = _____ 0.9 = _____

(5) **Adding** decimals.

93.04 + 40.6 + 8.3 = _____

4.94 + 5 + 38.7 = _____

59 + 1.86 + 94.3 = _____

$$\begin{array}{r} 341.8 \\ 2.8 \\ 5291.0 \\ +\ 38.4 \\ \hline \\ \hline \end{array}$$

(6) **Subtracting** decimals.

316.2 - 29.4 = _____

578.27 - 85.84 = _____

298.62 - 43.9 = _____

$$\begin{array}{r} 38.95 \\ -\ 7.28 \\ \hline \\ \hline \end{array}$$

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

Example: 296 x 3 = (300 x 3) - (4 x 3) = 900 - 12 = 888

368 x 5 = (_____ x _____) - (_____ x _____)

= _____ - _____ = _____

(8) **Dividing** decimals.

$3\overline{)1.68}$ $4\overline{)38.08}$

$6\overline{)35.4}$ $7\overline{)2.702}$

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

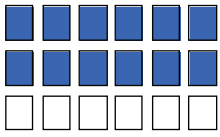
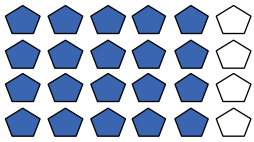
24, **32** 64, **72** 72, **80**

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

89 + 104 + 493 = **90** + **100** + **500** = **690**

1308 - 783 = **1300** - **800** = **500**

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

$\frac{2}{3}$  $\frac{5}{6}$ 

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

0.5 = **50%** 0.75 = **75%** 0.4 = **40%**

0.67 = **67%** 0.09 = **9%** 0.9 = **90%**

(5) **Adding** decimals.

93.04 + 40.6 + 8.3 = **141.94**

4.94 + 5 + 38.7 = **48.64**

59 + 1.86 + 94.3 = **155.16**

```
  341.8
    2.8
 5291.0
+ 38.4
-------
 5674.0
-------
```

(6) **Subtracting** decimals.

316.2 - 29.4 = **286.8**

578.27 - 85.84 = **492.43**

298.62 - 43.9 = **254.72**

```
  38.95
- 7.28
------
  31.67
------
```

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

Example: 296 x 3 = (300 x 3) - (4 x 3) = 900 - 12 = 888

368 x 5 = (**400** x **5**) - (**32** x **5**)

= **2000** - **160** = **1840**

(8) **Dividing** decimals.

```
  0.56
3)1.68

  5.9
6)35.4

  9.52
4)38.08

  0.386
7)2.702
```

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

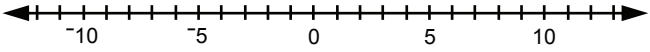
six hundred and two thousand, seven hundred and twenty-nine _____

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

6327 = _____ 1843 = _____

32496 = _____ 10985 = _____

(3) **Add** these positive and negative numbers.



⁻5 + 9 = _____ ⁻8 + 7 = _____

13 + ⁻9 = _____ 3 + ⁻12 = _____

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

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

6^2 = _____ 11^2 = _____

3^2 = _____ 15^2 = _____

(5) **Adding** decimals.

59.36 + 58.9 + 72 = _____

24.75 + _____ + 69 = 130.45

54 + 9.4 + _____ = 81.13

65.81
0.35
472.07
+ 3.98
_____
_____

(6) **Subtracting** decimals.

147.1 - _____ = 71.9

_____ - 64.38 = 509.36

264.17 - _____ = 218.57

188.35
-
93.79
_____

(7) **Multiplying** decimals.

53.8 × 4 = _____

9.72 × 6 = _____

4.15 × 7.3 = _____

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

Example: 195 ÷ 5 = (200 ÷ 5) - (5 ÷ 5) = 20 - 1 = 19

232 ÷ 8 = (_____ ÷ _____) - (_____ ÷ _____)

= _____ - _____ = _____

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

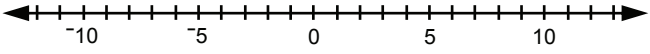
six hundred and two thousand, seven hundred and twenty-nine **602,729**

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

6327 = **6000** 1843 = **2000**

32496 = **32000** 10985 = **11000**

(3) **Add** these positive and negative numbers.



$^{-}5 + 9 =$ **4** $^{-}8 + 7 =$ **$^{-}$1**

$13 + {}^{-}9 =$ **4** $3 + {}^{-}12 =$ **$^{-}$9**

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

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

$6^2 =$ **36** $11^2 =$ **121**

$3^2 =$ **9** $15^2 =$ **225**

(5) **Adding** decimals.

59.36 + 58.9 + 72 = **190.26**

24.75 + **36.7** + 69 = 130.45

54 + 9.4 + **17.73** = 81.13

$$\begin{array}{r} 65.81 \\ 0.35 \\ 472.07 \\ +\ 3.98 \\ \hline \mathbf{542.21} \end{array}$$

(6) **Subtracting** decimals.

147.1 - **75.2** = 71.9

573.74 - 64.38 = 509.36

264.17 - **45.6** = 218.57

$$\begin{array}{r} 188.35 \\ -\ \mathbf{94.56} \\ \hline 93.79 \end{array}$$

(7) **Multiplying** decimals.

$$\begin{array}{r} 53.8 \\ \times\ 4 \\ \hline \mathbf{215.2} \end{array} \qquad \begin{array}{r} 9.72 \\ \times\ 6 \\ \hline \mathbf{58.32} \end{array}$$

$$\begin{array}{r} 4.15 \\ \times\ 7.3 \\ \hline \mathbf{1245} \\ \mathbf{29050} \\ \hline \mathbf{30.295} \end{array}$$

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

Example: 195 ÷ 5 = (200 ÷ 5) - (5 ÷ 5) = 20 - 1 = 19

232 ÷ 8 = (**240** ÷ **8**) - (**8** ÷ **8**)

= **30** - **1** = **29**

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

_____ , 56 _____ , 35 _____ , 91

(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**73 = _____= _____

63**5** = _____ = _____ **9**41 = _____ = _____

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

$^1/_2$ of 36 = _____ $^1/_4$ of 32 = _____

$^2/_3$ of 27 = _____ $^2/_5$ of 60 = _____

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

0.5 = _____ 0.25 = _____ 0.8 = _____

0.75 = _____ 0.08 = _____ 0.36 = _____

(5) **Adding** large numbers.

762 + 4835 + 24 = _____

74 + 232 + 3489 = _____

6941 + 86 + 119 = _____

```
  437
12980
   22
+ 508
-----
```

(6) **Subtracting** large numbers.

1472 - 617 = _____

24063 - 802 = _____

75085 - 9626 = _____

```
13625
- 945
-----
```

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

Example: 231 x 3 = (200 x 3) + (30 x 3) + (1 x 3) = 600 + 90 + 3 = 693

694 x 7 = (_____ x ___) + (___ x ___) + (___ x ___)

= _____ + _____ + ____ = _____

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

6)414 8)4992

7)623 9)4839

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

49 , 56 **28** , 35 **84** , 91

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

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

2**9**1 = **10's** = **90** **2**73 = **100's** = **200**

63**5** = **1's** = **5** 9**4**1 = **10's** = **40**

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

$^1/_2$ of 36 = **18** $^1/_4$ of 32 = **8**

$^2/_3$ of 27 = **18** $^2/_5$ of 60 = **24**

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

0.5 = $^1/_2$ 0.25 = $^1/_4$ 0.8 = $^4/_5$

0.75 = $^3/_4$ 0.08 = $^2/_{25}$ 0.36 = $^9/_{36}$

(5) **Adding** large numbers.

762 + 4835 + 24 = **5621**

74 + 232 + 3489 = **3795**

6941 + 86 + 119 = **7146**

```
  437
12980
   22
+ 508
-----
13947
```

(6) **Subtracting** large numbers.

1472 - 617 = **855**

24063 - 802 = **23261**

75085 - 9626 = **65459**

```
13625
- 945
-----
12680
```

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

Example: 231 x 3 = (200 x 3) + (30 x 3) + (1 x 3) = 600 + 90 + 3 = 693

694 x 7 = (**600** x **7**) + (**90** x **7**) + (**4** x **7**)

= **4200** + **630** + **28** = **4858**

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

```
  69
6)414
```

```
  624
8)4992
```

```
  89
7)623
```

```
  537 r 6
9)4839
```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