4 Basic Facts 1

A Counting

1 Counting up in ones, what number comes . . .

a) after 39 499? .....

b) before 56 000? .....

2 Counting up in fives, what number comes . . .

a) before 2500? .....

b) after 36 095? .....

3 Counting up in tens, what number comes . . .

a) before 4000? .....

b) after 53 000? .....

4 Counting up in hundreds, what number comes . . .

a) before 66 000? .....

b) after 380 900? .....

B Disposable Cash

1 **This TV was $1040 now $100 off**

What is the price of the TV now?

.....

2 When the rugby game started 35 200 spectators had taken their seat. Another three thousand spectators were on their way in. How many people watched this game?

.....

3a) A man saved $152 660. Write this amount in words.

.....

.....

b) The man uses his savings to buy a new car for fifty thousand dollars. How much money is left?

$ .....

C Hundreds and Thousands

1 Jot down the answer to these.

a) 5 x 10 = ... b) 7 x 1000 = ...

c) 10 x 16 = ... d) 100 x 83 = ...

e) 10 x 50 = ... f) 205 x 10 = ...

g) 100 x 417 = ...

h) 99 x 1000 = ...

2 Work out.

a) 60 ÷ 10 = ...

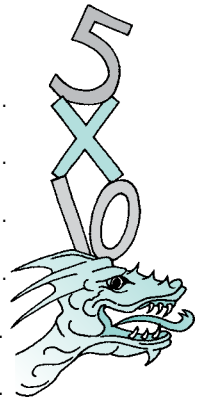
b) 900 ÷ 100 = ...

c) 500 ÷ 10 = ...

d) 7200 ÷ 100 = ...

e) 44 000 ÷ 1000 = ...

f) 10 200 ÷ 10 = ...



D Money Matters

1a) I have $6445 in my savings account. I withdraw all my money and I want as many ten dollar notes as possible.

How many $10 notes will I get? .....

b) If I want it in hundred dollar notes. How many will I get?

.....

2 A Lotto prize of three million dollars will be paid out in one hundred dollar notes.

a) How many hundred dollar notes will there be?

.....

.....

.....

b) The hundred dollar notes are tied in bundles of one hundred. How many bundles should there be?

.....

.....

A Card Game

Rules of the Card Game :

Each player is dealt some cards. The spades and clubs (♠♣) have a positive value, hearts and diamonds (♥♦) have a negative value. Picture cards are worth 10, the Ace is worth 20. The player whose hand holds the largest value wins.

Example :

Tammy's hand

Patrick's hand

Tammy's cards are worth 5, $^{-}8$, $^{-}3$ total value $^{-}6$
Patrick's cards are worth 10, $^{-}20$, 6 total value $^{-}4$
Patrick wins because $^{-}4$ is more than $^{-}6$.

1 Calculate the value of these four hands.

a) 

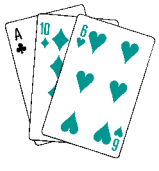
Annabel

.....

b) 

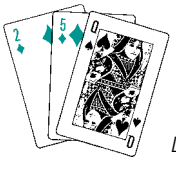
Blake

.....

c) 

Connor

.....

d) 

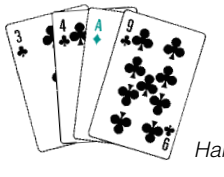
Dana

.....

e) The winner is

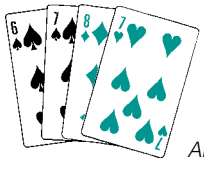
.....

2 Hamuera and Aroha are playing this game with 4 cards each. Who wins? .....



Hamuera

.....



Aroha

.....

B Writing Sums

Look back at the example in Exercise A.
Tammy's hand can be described by the sum $5 + {}^{-}8 + {}^{-}3 = {}^{-}6$
Patrick's hand can be described by the sum $10 + {}^{-}20 + 6 = {}^{-}4$

1 Describe with a sum, the hands of Annabel, Blake, Connor, and Dana as shown in column A.

a) Annabel : .....

b) Blake : .....

c) Connor : .....

d) Dana : .....

2 

The value of this hand can be described with a multiplication. How?

.....

3 Calculate these sums. Think of cards.

a) $^{-}8 + 7 =$ .....

b) $6 + {}^{-}10 =$ .....

c) $2 + {}^{-}6 + 8 =$ .....

d) $^{-}10 + 4 + 10 =$ .....

e) $7 + {}^{-}3 + {}^{-}4 =$ .....

f) $10 + 5 + {}^{-}2 =$ .....

4 Work out these multiplications.

a) $3 \times {}^{-}10 =$ .....

b) $5 \times {}^{-}3 =$ .....

c) $8 \times {}^{-}4 =$ .....

C Quiz Time

1 In a multichoice quiz, competitors get 2 points for a correct answer, 0 points if the question is skipped and they lose 1 point for a wrong answer. The quiz has 10 questions. Levi has done 4 questions. He got 1 right and 3 wrong. Levi skips the next two questions. Now what is the highest possible total he can score for the quiz?

.....

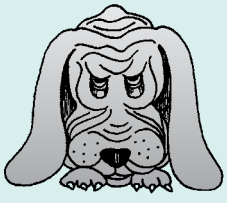
.....

34 Decimal Place Values

A Know Your Place

hundreds	tens	ones	tenths	hundredths	thousandths

This diagram shows the place values of decimal numbers. The dot is called the **decimal point,** the numbers following the decimal point are smaller than one whole.



We already know :
ten ones make a ten; 10 x 1 = 10
ten tens make a hundred; 10 x 10 = 100
and so on . . .

We can start lower down :
ten tenths make a one; 10 x 0.1 = 1
ten hundredths make a tenth; 10 x 0.01 = 0.1 and so on . . .

Examples : We will look at the decimal number 16.205
a) What is the place value of the digit 5?
b) Which digit is in the tenths position?
c) How do you say the number in words?

Answers : a) thousandths b) 2
c) *sixteen point two, zero, five* or
sixteen, two tenths and five thousandths

1 Are these statements correct ☑ or wrong ☒ ?

a) Three tenths is written as 0.03. ☐

b) A tenth is more than a hundredth. ☐

c) One whole divided by 10 is one tenth. ☐

d) Ten hundredths make a thousandth. ☐

2 Look at the number 253.016.

a) Name the place value of the digit . . .

i) 5 .....

ii) 1 .....

b) Which digit has place value *thousandth*? .....

3 How do you say the number 24.03 in words?

Either : .....

.....

or : .....

.....

4 Work out the result of . . .

a) 10 x 0.1 = ... b) 10 x 100 = ...

c) 10 x 1 = ... d) 10 x 0.001 = ...

B Magic Ten

When we multiply a number by 10, then every digit in the number moves one place value up.

Examples : 10 x 0.3 = 3 | 0 | 3 | → | 0 | 3 |

10 x 4.2 = 42 | 4 | 2 | → | 4 | 2 |

10 x 5.06 = 50.6 | 5 | 0 | 6 | → | 5 | 0 | 6 |

When we divide a number by 10, then all digits in the number move one place value down.

Examples : 5 ÷ 10 = 0.5 | 5 | → | 5 |

1.6 ÷ 10 = 0.16 | 1 | 6 | → | 1 | 6 |

24.39 ÷ 10 = 2.439 | 2 | 4 | 3 | 9 | → | 2 | 4 | 3 | 9 |

1 Multiply by 10.

a) 10 x 0.6 = ... b) 10 x 1.7 = ...

c) 10 x 0.45 = ... d) 10 x 3.94 = ...

e) 10 x 0.151 = ... f) 10 x 6.203 = ...

2 Divide by 10.

a) 80 ÷ 10 = ... b) 3.8 ÷ 10 = ...

c) 23 ÷ 10 = ... d) 146 ÷ 10 = ...

e) 0.39 ÷ 10 = ... f) 0.04 ÷ 10 = ...

3 Multiply again and again.

a) 100 x 3.4 = 10 x 10 x 3.4 =
10 x 34 = ...

b) 1000 x 0.56 = 10 x 10 x 10 x 0.56
= .....

c) 100 x 23.8 = ...

d) 1000 x 0.07 = ...

e) 10000 x 4.9 = ...

5 Divide again and again.

a) 16 ÷ 100 = 16 ÷ 10 ÷ 10 = 1.6 ÷ 10 = ...

b) 203 ÷ 100 = ...

c) 84 ÷ 1000 = ...

d) 3.5 ÷ 100 = ...

e) 290 ÷ 1000 = ...

A Fractions on the Calculator

Ruby knows that '$\frac{1}{2}$' can be read as the fraction *'one half'* and also as the division *'1 divided by 2'*.
On her calculator Ruby presses [1] [÷] [2] [=]. The display shows the decimal 0.5.
Conclusion : When asked to write a fraction as a decimal, we use our calculator and press [numerator] [÷] [denominator] [=].

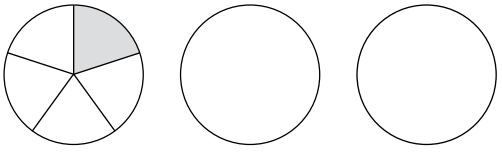
1 Find out how these fractions are written as a decimal.

a) $\frac{1}{4}$ = ... b) $\frac{3}{4}$ = ... c) $\frac{1}{5}$ = ... d) $\frac{3}{5}$ = ...

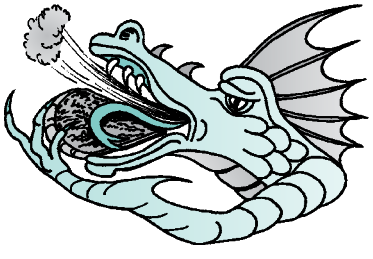
e) $\frac{6}{10}$ = ... f) $\frac{4}{100}$ = ... g) $\frac{23}{100}$ = ... h) $\frac{60}{100}$ = ...

2a) The amount of three dollars is shared by five children.

How much money should each get? $.....



b) Three pizzas are shared by five children.
What fraction of a pizza should each child get? .....



3 Colour the right answer.

a) Which of these decimals equals $\frac{73}{100}$?

7.3	70.3	1.73	0.73

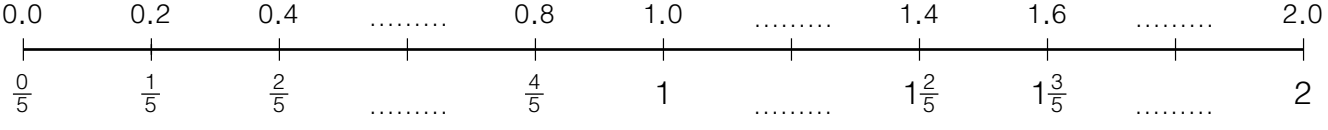
b) If 3 pizzas are shared by 8 people the fraction of pizza for each person is . . .

$\frac{8}{3}$	$\frac{3}{8}$	$\frac{3}{5}$	$\frac{5}{3}$

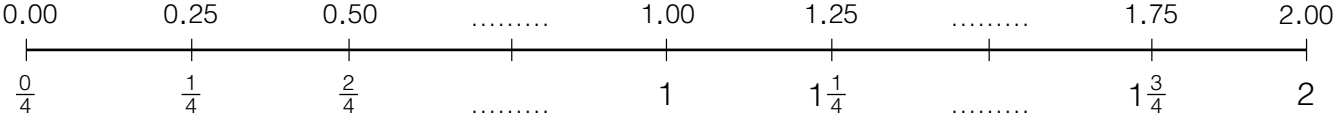
B Having it Both Ways

1 The relationship between fractions and decimals is shown on the numberlines. Fill in the missing fractions and decimals.

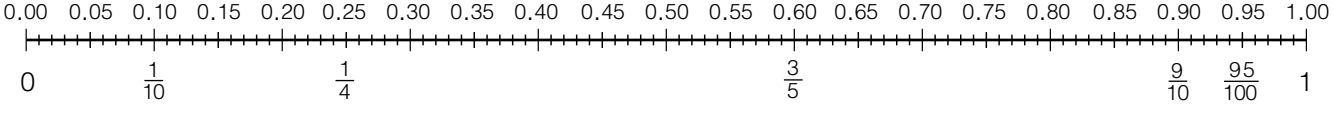
a)



b)



2 This numberline goes from 0 to 1 in steps of one hundredth. We are unable to label each marking on the line.



The decimal 0.60 is equal to the fractions $\frac{60}{100}$ and $\frac{3}{5}$.

Write two fractions that are equal to the decimal.

a) 0.40 ..... and ..... b) 0.75 ..... and ..... c) 0.30 ..... and .....

62 Writing a Rule 1

Algebra

A Using Written Rules

1a) A telephone company charges 15¢ per minute for the first 5 minutes, after 5 minutes the call costs 10¢ per minute. Calculate the cost of a 12 minute call.

.....

.....

b) An online clothing shop has the following deal : The first T-shirt costs $30, each following T-shirt costs $25. Postage for each package is fixed at $5.
Tom orders 4 T-shirts. How much is charged?

.....

.....

.....

2 Natalia sits in a group of four. She shares her raisins with her group using this rule : *'I divide the number of raisins by 4 and the remainder is added to my share.'* How many raisins does Natalia get if she has 35 raisins to share?

.....

.....

B Making up a Formula

Example : At the cinema a student ticket costs $2 more than a child ticket. Write a formula using s for cost of a student ticket and c for the cost of a child ticket.

Answer : formula $s = c + 2$

1 When children play musical chairs there is always one less chair than there are children.

a) How many chairs with 10 kids? .....

b) If we use c for number of chairs and k for number of kids, the formula is : c = ...

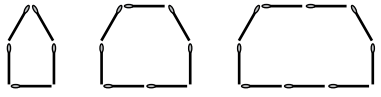
2a) Cinderella must shine 16 shoes. How many pairs of shoes is that? .....

b) Using s for number of shoes and p for pairs of shoes, the formula is : p = ...

3 In a card game each player gets 5 cards. Using c for number of cards dealt and n for number of players, the formula is : c = ...

C Townhouses

1 Mauria uses matchsticks to make these townhouses.



1 house 2 townhouses 3 townhouses .....

4 townhouses

a) Draw the diagram with 4 townhouses.

b) Fill in the table.

number of houses	1	2	3	4	5
number of matches	**5**				

c) Complete the written rule for this pattern.

The first house needs ..... *matches, for every extra house we need* ..... *more matches.*

d) How many matches are needed for a row of 20 townhouses? .....

.....

e) Mauria uses 31 matches for a row of town houses. How many houses are there in this row?

.....

f) Mauria has 100 matches. She wants to make two separate rows of town houses. How many houses can she build using all these matches? .....

.....

72 Task 1

A An Investigation into Travel Cost

The Wilsons (mum, dad and two children) live in Hamilton. Next month they plan to visit relatives in Wellington and Nelson. They first stay in Wellington for 4 days, then in Nelson for 4 days. Then they must travel home again, maybe with an overnight stop in Wellington.

They need to decide whether to go with their own car, or travel by plane.

Travel Options :

1] They drive from Hamilton to Wellington in their own car. After staying with their relatives they take the ferry boat (with car) to Picton and drive on to Nelson.

2] They fly from Hamilton to Wellington and then, after 4 days, they fly from Wellington to Nelson. Family will pick them up from the airports.

Your task is to calculate the cost of each of the travel options and to make a recommendation, taking into account advantages and disadvantages.

Relevant information :

- Mr Wilson has worked out that the running cost of his car is 35 cents per kilometre driven; this includes fuel and wear and tear to the car.
- The distance Hamilton to Wellington is 519 km; the distance Picton to Nelson is 134 km.
- Each way the ferry costs $208 for the car and 1 adult. The fare for the second adult is $54, a child's fare is $\frac{2}{3}$ of the adult fare.
- A flight between Hamilton and Wellington costs $129 each way. Adults and children pay the same.
- The flights between Wellington and Nelson are $84 per adult for the round trip (that means *'going there and back'*). Children pay 75% of the adult fare.

Calculations and Recommendations.

Metric Unit Conversions 79

A Think Metric

1 This box contains metric units and imperial units mixed up. Cross out the imperial units, leaving just the metric.

gram	feet	mile	litre	pound
kilometre	stone	centimetre		
yard	tonne	gallon	inch	

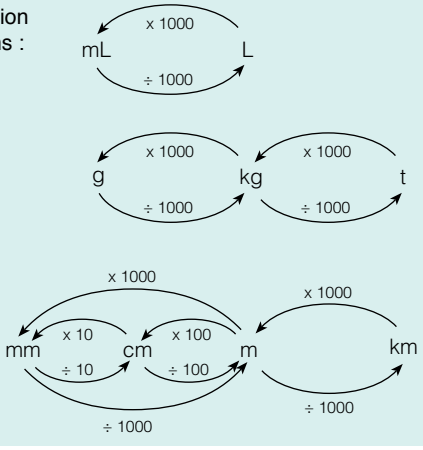
2 What metric unit do you use when you . . .

a) weigh a *fast post* letter? .....

b) find the volume of a bath tub? .....

c) measure the length of a room? .....

Conversion diagrams :



3 Use the conversion diagrams above to help you fill in the gaps.

a) 2 km = ... m (**2 x 1000**)

b) 4 cm = ... mm (**4 x**)

c) 1.3 m = ... mm (.....)

d) 0.5 t = ... kg (.....)

e) 2.8 L = ... mL (.....)

4a) 800 cm = ... m (**800 ÷ 100**)

b) 600 mm = ... m (**600 ÷**)

c) 2500 mL = ... L (.....)

d) 4900 g = ... kg (.....)

e) 650 mm = ... cm (.....)

B Make It Right

1 Have a good look at each statement and, if you don't agree, make it right.

a) 0.405 m = 405 cm

.....

b) 6.125 t = 6125 kg

.....

c) 0.02 mL = 20 L

.....

d) 0.4 cm = 4 mL

.....

e) 2603 cm = 26.03 m

.....

f) 920 m = 0.092 km

.....

g) 30 400 km = 30.4 t

.....

h) 88 mL = 0.088 L

.....

i) 550 mm = 5.50 cm

.....

j) 349 m = 0.349 kg

.....

k) 40 100 kg = 40.1 t

.....

l) 6.82 m = 6082 mm

.....

m) 3.04 km = 3004 m

.....

n) 6100 mm = 610 cm = 6.1 m

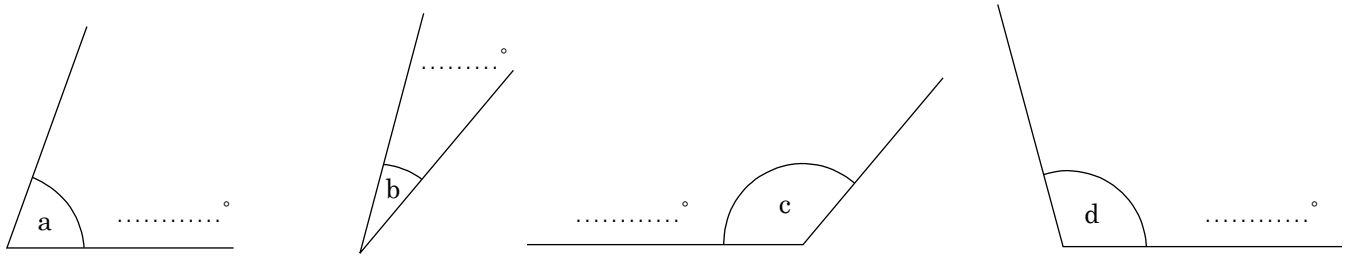
.....

94 Angles 1

Geometry

A Using a Protractor

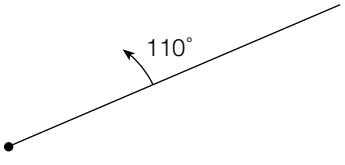
1 Use your protractor to measure these angles.



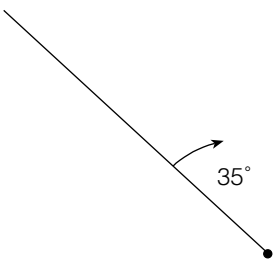
2 Draw the second arm of these angles.

a)

b)

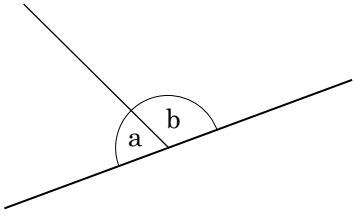


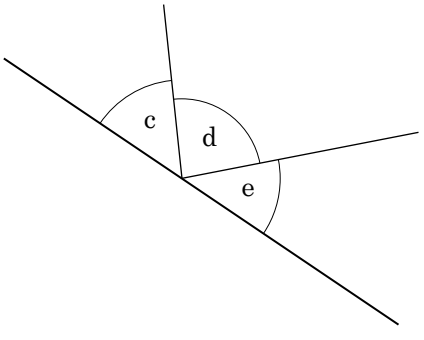
c)



3 Measure the size of each angle.

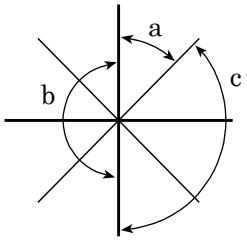
a = ...° b = ...° c = ...° d = ...° e = ...°





B Without a Protractor

1



a) How many degrees in . . .

a quarter turn? ..... a half turn? ..... a full turn? .....

b) How many degrees in . . .

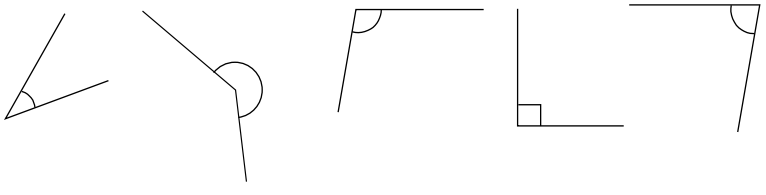
angle a ? ..... angle b? ..... angle c ? .....

2 *Acute angles* are less than 90°. *Obtuse angles* are over 90° but under 180°.
Colour the acute angles red and the obtuse angles blue.

a)

120°	58°	90°	100°
200°	103°	15°	180°

b)



A Running at Top Speed

The table shows the results of an investigation into animals running at top speed. For each animal we measured how far it could run and how long it took.

Use the information to work out the speed of each animal. (That means : If it could keep going, how many kilometres would this animal run in 1 hour?)

As a comparison we also showed running abilities of human athletes.

animal	distance run	time taken	speed
Ostrich	24 km	½ hour	..... km/h
Kangaroo	2 km	3 min	..... km/h
Hyena	20 km	25 min	..... km/h
Antelope	6 km	6 min	..... km/h
Cheetah	800 m	30 sec	..... km/h
Grizzly Bear	3 km	5 min	..... km/h
Human	100 m	10 sec	..... km/h
Human	42 km	3½ hour	..... km/h

1 Complete the table with the speeds you calculated.

working space

2a) Write a paragraph comparing the animals' performances.

.....

.....

.....

.....

.....

.....

.....

.....

.....

b) When confronted with a grizzly bear, should you run? Explain your answer.

.....

.....

.....

c) Can the antelope escape from the cheetah? Explain your answer.

.....

.....

.....

112 Starting an Investigation

A Vocabulary

Statistics is a branch of mathematics concerned with the collection of data, then organising and interpreting the data.

1 Complete the following descriptions with a word from the box. A dictionary could be helpful.

organising tally-table anonymous investigation questionnaire data analysing

a) An ..... is a careful examination in order to discover facts.

b) ..... is another word for information.

c) A ..... is a list of questions used to obtain information from people.

d) ..... means your name is not mentioned.

e) A ..... is used to record the scores you are collecting.

f) ..... the data means that you group the information into tables and graphs.

g) ..... data means you examine the displays and explain points of interest.

B Ask a Question

A statistical **investigation** or **survey** is started by posing some questions which could be answered by collecting data.

Example : If you were investigating the traffic in front of your school before school starts, two possible questions could be :

a) *By what method of transport do pupils arrive at school?*

b) *How many cars stop in front of the school between 8.15 and 8.45 am?*

1 Leilani helps at the vet clinic. Write down 2 questions for a survey about the vet clinic.

a) .....

.....

.....

b) .....

.....

.....

2 Robert opens the junk-mail folder on his email. Write 2 questions for an investigation of junk-mail.

a) .....

.....

.....

b) .....

.....

.....

C Television

1a) You are planning to do a survey about television. Write down 2 questions about TV that are worth investigating.

i) .....

ii) .....

b) What will you do to get the data for this investigation? If you interview people, who will they be? If you look for written information, where will you look?

.....

.....

.....

Answer Section A1

Pages 4 - 16
Whole Numbers

Page 4 - Basic Facts 1

A1 a) 39 500 b) 55 999
A2 a) 2495 b) 36 100
A3 a) 3990 b) 53 010
A4 a) 65 900 b) 381 000

B1 $940 B2 38 200 people
B3 one hundred and fifty-two thousand, six hundred and sixty.
B4 $102 660

C1 a) 50 b) 7000 c) 160 d) 8300
e) 500 f) 2050 g) 41 700 h) 99 000
C2 a) 6 b) 9 c) 50 d) 72
e) 44 f) 1020

D1 a) 644 b) 64
D2 a) 30 000 b) 300

Page 5 - Basic Facts 2

A1 a) i) 48 100 ii) 48 100
b) 60 721, 48 100, 11 064, 5901, 4825, 1003, 974, 176.
A2 a) 4125, 4152, 4251, 4521 b) 5412
A3 a) 14 014 b) 910 000

B1 a) 40 b) 70 c) 110 d) 3260
B2 a) 400 b) 1000 c) 1900 d) 3500
B3 a) 5000 b) 4500 c) 4540

C1 a) Bulmer Cavern b) Aurora-Te-Ana-au
c) 39 500, 28 730, 24 252, 13 712, 12 197, 7300, 6400
C2 a) 12 200 m b) 29 000 m
c) thirty-nine thousand, five hundred metres.

Page 6 - Strategies + and −

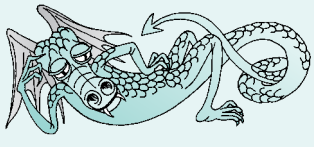
A1 a) 95 b) 252 c) 473 d) 700
e) 832 f) 1515 g) 7200 h) 7843
i) 33 600
A2 a) 187 b) 456 c) 531 d) 920
e) 3130 f) 378 g) 462
A3 a) 13 b) 31 c) 46 d) 52
e) 14 f) 37 g) 260 h) 230
i) 290 j) 760 k) 555 l) 242

B1 a) 40 b) 400 c) 58 d) 20
e) 200 f) 50
B2 a) 276 b) 189 c) 391 d) 596
B3 a) 724 b) 165 c) 392 d) 248
e) 46 f) 861
B4 a) 108 b) 294 − 60 − 6 = 228
c) 513 − 40 − 2 = 471 d) 407 e) 218
B5 a) 12 + 105 = 117 b) 1 + 112 = 113
c) 20 + 222 = 242 d) 25 + 144 = 169
e) 150 f) 1235

Page 7 - More Strategies + and −

A1 a) 497 b) 426 c) 373 d) 582
e) 515 f) 466
A2 a) 756 b) 555 c) 185 d) 133
e) 1281 f) 2019
A3 a) 85 b) 161 c) 141 d) 503
e) 898 f) 1396
A4 a) 395 b) 269 c) 455 d) 419
e) 521

B1 a) (50 + 15) − (20 + 8) = 37 b) 56 c) 68
d) 239 e) 366
B2 a) (300 + 120) − (100 + 60) = 260 b) 390
c) 440 d) 380



Page 8 - Paperwork + and −

A1 a) 1182 − 22 = 1160 b) 1036 − 15 = 1021
c) 948 − 34 = 914 d) 4739 − 16 = 4723
e) 2815 − 25 = 2790 f) 4832 − 32 = 4800
A2 a) 6548 − 25 = 6523 b) 5238 − 34 = 5204

B1 a) 312 + 6 = 318 b) 125 + 19 = 144
c) 633 + 25 = 658 d) 3151 + 37 = 3188
e) 645 + 44 = 689 f) 4203 + 29 = 4232
B2 a) 2725 + 35 = 2760 b) 2065 + 11 = 2076

Page 9 - Adding - Carrying

A1 a) 12 + 40 + 900 + 13 000 + 50 000 = 63 952
b) 11 + 150 + 600 + 11 000 + 40 000 = 51 761
c) 16 + 90 + 1200 + 13 000 + 30 000 = 44 306
d) 7 + 70 + 1100 + 10 000 + 90 000 = 101 177
A2 a) 72 327 b) 99 842 c) 71 803 d) 65 048
A3 a) 19 208 km b) 68 449 people

Page 10 - Subtracting - Decomposition

A1 a) (3000 + 1200 + 40 + 16) − (2000 + 300 + 30 + 8)
Ans 1918
b) (5000 + 1200 + 100 + 12) − (1000 + 700 + 40 + 6)
Ans 4566
A2 a) 2917 b) 773 c) 33 285 d) 16 809
A3 a) 16 + 45 = 61 more girls b) 57 951

Page 11 - Multiplication Facts

A1 a) topline 15, 40, 45 middle line 21, 56, 63
bottom line 6, 16, 18
b) topline 36, 63, 72 middle line 16, 28, 32
bottom line 24, 42, 48
A2 possible answers :
a) 2 x 9 and 3 x 6 b) 4 x 6 and 3 x 8
c) 6 x 6 and 4 x 9 d) 3 x 4 and 2 x 6
e) 5 x 6 and 3 x 10

B1 a) 180 b) 50 c) 106 d) 122
e) 168 f) 152 g) 54 h) 416
i) 690 j) 194
B2 a) 24 b) 33 c) 47 d) 55
e) 422 f) 350 g) 380 h) 382
i) 450 j) 493

C1 a) 7 b) 9 c) 8 d) 5
C2 a) 6 b) 2 c) 3 d) 8
C3 a) 24 b) 17
D1 a) 3 R 2 b) 4 R 5 c) 8 R 5 d) 6 R 0
D2 a) R 0 b) R 1 c) R 2 d) R 4
e) R 3 f) R 3

Page 12 - Multiplication Strategies 1

A1 a) No b) 30
A2 a) 20 x 7 = 140 b) 8 x 9 = 72
c) 50 x 3 = 150 d) 8 x 30 = 240
e) 2 x 72 = 144 f) 10 x 21 = 210
g) 6 x 20 = 120

B1 a) 12 x 100 = 1200 b) 42 x 100 = 4200
c) 6 x 1000 = 6000 d) 24 x 1000 = 24 000
B2 a) 4000 b) 1800 c) 21 000 d) 8 000
e) 420 000

C1 a) $\frac{1}{2}$ of 840 = 420 b) $\frac{1}{2}$ of 720 = 360
c) 215 d) 1400 e) 1700 f) 1050
C2 a) 145 b) 700 c) 1600 d) 315
e) 4600 f) 1350

Page 13 - Multiplication Strategies 2

A1 a) 2 x 26 = 52 b) 23 x 100 = 2300
c) 6 x 30 = 180 d) 9 x 70 = 630
A2 a) 300 x 4 = 1200 b) 2 x 44 = 88
c) 90 x 8 = 720 d) 50 x 6 = 300
A3 a) 450 b) 42 c) 64 d) 360
e) 210 f) 230 g) 900 h) 1400

B1

Across	Down
1. 360	1. 320
3. 162	2. 64
6. 24	4. 65
8. 56	5. 265
9. 144	7. 54 000
11. 72 000	9. 125
13. 500	10. 400
15. 48	12. 542
17. 85	14. 750
18. 210	16. 81
19. 240	17. 84

Pages 14 - Multiplication Strategies 3

A1 a) (4 x 50) + (4 x 4) = 200 + 16 = 216
b) 360 + 18 = 378 c) 500 − 20 = 480
d) 480 − 8 = 472 e) 280 − 14 = 266
f) 320 + 32 = 352 g) 630 + 18 = 648
A2 a) 240 + 18 = 258 b) 270 − 12 = 258
c) 400 − 10 = 390 d) 350 − 21 = 329
e) 450 + 36 = 486 f) 320 − 8 = 312
g) 420 + 35 = 455

B1 a) (3 x 49) x 10 = (150 − 3) x 10 = 1470
b) (120 + 24) x 10 = 1440 c) (140 − 14) x 10 = 1260
d) (560 + 24) x 10 = 5840 e) (270 − 18) = 2520
f) (360 − 6) x 10 = 3540 g) (320 + 16) x 10 = 3360
B2 a) half of 6700 = 3350
b) (99 x 8) x 10 = (800 − 8) x 10 = 7920
c) (8 x 48) x 10 = (400 − 16) x 10 = 3840
d) (180 + 24) x 10 = 2040 e) 50 x 9 = 450
f) (350 + 42) x 10 = 3920 g) (450 − 9) x 10 = 4410

Page 15 - Understanding Division

A1 350 ÷ 5 = 70 000; Each person gets $70 000.
A2 27000 ÷ 30 = 900; He plants 900 shrubs per hectare.

B1 54000 ÷ 600 = 9; 9 people shared the prize.
B2 12000 ÷ 200 = 60; 60 hectares will be planted.

C1 a) 8000 b) 5 c) 600 d) 40
e) 6 f) 500 g) 9300 h) 40
i) 7

Pages 16 - Division Strategies

A1 a) (800 + 40 + 16) ÷ 4 = 200 + 10 + 4 = 214
b) (300 + 60 + 12) ÷ 6 = 50 + 10 + 2 = 62
c) (500 + 350 + 35) ÷ 5 = 100 + 70 + 7 = 177
d) (600 + 240 + 12) ÷ 3 = 200 + 80 + 4 = 284
e) (400 + 320 + 32) ÷ 4 = 100 + 80 + 8 = 188
f) (3200 + 320 + 40) ÷ 8 = 400 + 40 + 5 = 445
g) (4200 + 210 + 7) ÷ 7 = 600 + 30 + 1 = 631
h) (9000 + 630 + 45) ÷ 9 = 1000 + 70 + 5 = 1075

B1 a) (216 ÷ 3) ÷ 4 = 72 ÷ 4 = 18
b) (832 ÷ 4) ÷ 4 = 208 ÷ 4 = 52
c) (924 ÷ 3) ÷ 7 = 308 ÷ 7 = 44
d) (1800 ÷ 3) ÷ 5 = 600 ÷ 5 = 120

B2 a) (3720 ÷ 10) ÷ 4 = 372 ÷ 4 = 93
b) (19500 ÷ 100) ÷ 5 = 195 ÷ 5 = 39
c) (8760 ÷ 10) ÷ 12 = 876 ÷ 12 = 73