NAME _____

STEP IT UP! 25

MENTAL MATHS

ADDITION & SUBTRACTION

25 + 25 = 50	11 – 3 = 8	13 – 6 = 7
20 + 20 = 40	13 – 8 = 5	17 – 15 = 2
35 + 35 = 70	19 – 7 = 12	15 – 11 = 4
50 + 50 = 100	21 – 5 = 16	22 – 7 = 15
45 + 45 = 90	20 – 13 = 7	21 – 8 = 13

MULTIPLICATION & DIVISION

7 × 6 = 42	800 ÷ 8 = 100	8 ÷ 8 = 1
7 × 9 = 63	88 ÷ 8 = 11	72 ÷ 8 = 9
7 × 12 = 84	160 ÷ 8 = 20	32 ÷ 8 = 4
7 × 15 = 105	96 ÷ 8 = 12	48 ÷ 8 = 6
7 × 30 = 210	400 ÷ 8 = 50	56 ÷ 8 = 7

NUMBER & ALGEBRA

NUMBER & PLACE VALUE

1 Work out the kilometres travelled each hour.

672 km → 6 hours

112 km each hour

132 km → 4 hours

33 km each hour

1008 km → 3 hours

336 km each hour

490 km → 5 hours

98 km each hour

291 km → 3 hours

97 km each hour

4992 km → 2 hours

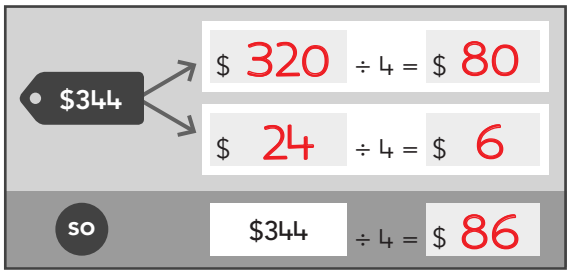
2496 km each hour

2 If I travel at 90 km each hour for $3\frac{1}{2}$ hours,

what is the distance of my trip? 315 km

MONEY & FINANCIAL MATHEMATICS

3 Complete the diagram and sentences to show how you can pay for the item over 4 months.



4 Use a written method to work out the equal repayments for $1560 over 8 months.

$ 195 each month

5 Work out these equal monthly repayments.

$1225 for 7 months: $ 175 each month	$2048 for 8 months: $ 256 each month
$3105 for 9 months: $ 345 each month	$892 for 4 months: $ 223 each month

To work out an equal **monthly repayment**, you divide the total cost by the number of months.

MEASUREMENT & GEOMETRY

USING UNITS OF MEASUREMENT

6

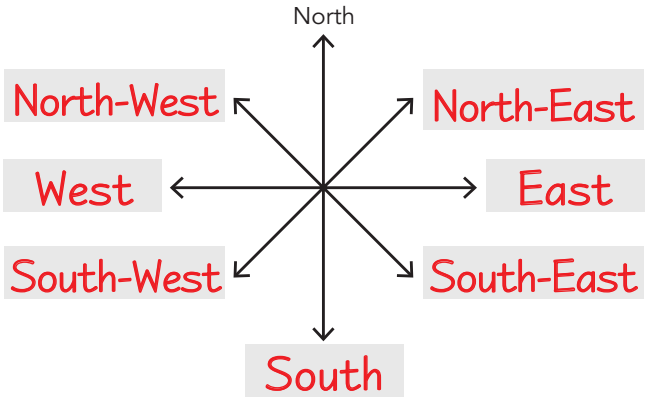
5 cm	50 mm	2.5 m	250 cm
600 m	0.6 km	2.03 km	2030 m

7 Complete each table to show equivalent lengths.

6.455 km	1.265 km
6455 m	1265 m
645 500 cm	126 500 cm
6 455 000 mm	1 265 000 mm

LOCATION & TRANSFORMATION

8 **a.** Label all the compass directions.

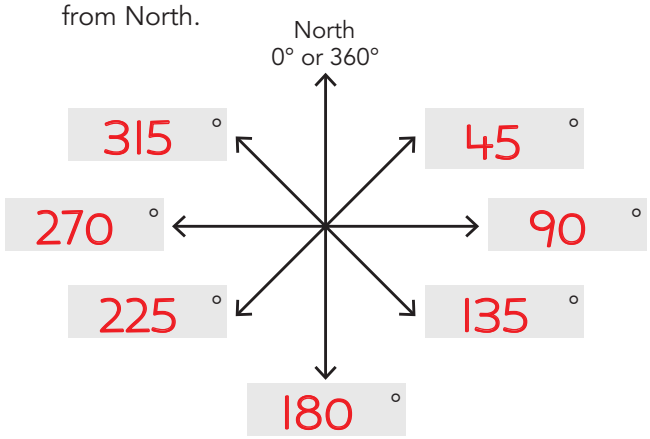


b. Turning in a clockwise direction, how many degrees are there between these points?

- North ⟶ East 90°
- South ⟶ West 90°
- East ⟶ South-west 135°
- South-west ⟶ East 225°
- South ⟶ South-east 315°
- East ⟶ North 270°

GEOMETRIC REASONING

9 Write the degrees for each clockwise turn from North.



STATISTICS & PROBABILITY

CHANCE

10 Look at a standard deck of 52 cards.

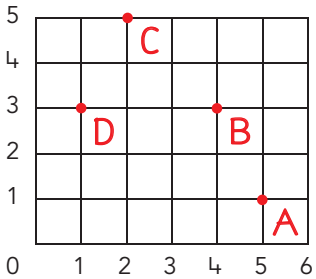
If you randomly select 1 card what are the chances it will be:

a 7 of clubs	$\frac{1}{52}$
any 7	$\frac{4}{52}$
a red 7	$\frac{2}{52}$
any black card	$\frac{1}{2}$
any Ace	$\frac{4}{52}$
any King, Queen or Jack	$\frac{12}{52}$
a black King	$\frac{2}{52}$
any card less than 6	$\frac{20}{52}$

TESTER

Plot these points on the grid by writing the letters at the matching co-ordinates.

A (5,1) **B** (4,3) **C** (2, 5) **D** (1,3)



Show your answer on the grid.

PARENT/CARER SIGNATURE _____

NAME _____

STEP IT UP! 26

MENTAL MATHS

ADDITION & SUBTRACTION

50 + 50 = 100	18 – 7 = 11	20 – 12 = 8
30 + 40 = 70	26 – 11 = 15	28 – 14 = 14
40 + 60 = 100	19 – 7 = 12	24 – 13 = 11
15 + 85 = 100	40 – 15 = 25	22 – 5 = 17
35 + 45 = 80	31 – 12 = 19	21 – 11 = 10

MULTIPLICATION & DIVISION

8 × 9 = 72	19 × 1 = 19	96 ÷ 2 = 48
8 × 4 = 32	19 × 9 = 171	126 ÷ 2 = 63
8 × 6 = 48	19 × 4 = 76	138 ÷ 2 = 69
8 × 8 = 64	19 × 8 = 152	84 ÷ 2 = 42
8 × 7 = 56	19 × 5 = 95	72 ÷ 2 = 36

NUMBER & ALGEBRA

NUMBER & PLACE VALUE

1 Show the remainder in 3 different ways.

Answer			
83 ÷ 4 =	20 r 3	20 $\frac{3}{4}$	20.75
84 ÷ 4 =	21	21	21
85 ÷ 4 =	21 r1	21 $\frac{1}{4}$	21.25
86 ÷ 4 =	21 r2	21 $\frac{2}{4}$	21.5
87 ÷ 4 =	21 r3	21 $\frac{3}{4}$	21.75
88 ÷ 4 =	22	22	22
89 ÷ 4 =	22 r1	22 $\frac{1}{4}$	22.25
90 ÷ 4 =	22 r2	22 $\frac{2}{4}$	22.5

2 Solve the problem. Express the answer in the most appropriate way.

$253 is being evenly split among 5 people.
How much money does each person receive?

$50.60

Golf balls are packed in boxes of 3.
How many boxes are required for 215 golf balls?

72 boxes (with 2 golf balls in one)

71 lollies are shared equally among 5 friends.
How many lollies are in each share?

14 lollies each with 1 lolly left over

MONEY & FINANCIAL MATHEMATICS

3 A group of friends equally share the cost of this cake. For each group work out the cost for each person.

Number of friends	Cost for each person
4	$2.20
5	$1.76
8	$1.10
16	55c

4 Work out the cost for each minute of these calls.

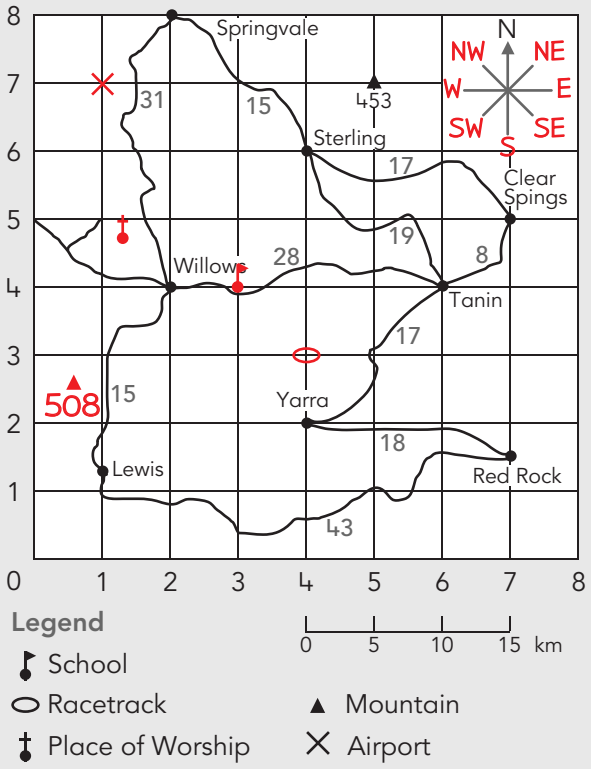
$2.72 for 4 minutes	$3.95 for 5 minutes
68c each minute	79c each minute
$8.05 for 7 minutes	**$7.56 for 6 minutes**
$1.15 each minute	$1.26 each minute

You can **split the dividend** to make division of dollar-and-cent amounts easier.
For example, when you *see* $4.41 ÷ 7 *think* $4.20 ÷ 7 plus 21 ÷ 7 = 60c + 3c = 63c.

MEASUREMENT & GEOMETRY

LOCATION & TRANSFORMATION

Use this map to answer Questions 5 to 10.



5 Write the co-ordinates for these places.

Willows (2 , 4)	Yarra (4 , 2)
Springvale (2 , 8)	Sterling (4 , 6)
Mountain (5 , 7)	Clear Springs (7 , 5)

6 Draw these places onto the map.

a. School (3,4)

b. Airport (1,7)

c. Racetrack — 5 km north of Yarra

d. Place of Worship — 5 km north-west of Willows

e. 508 m Mountain — 10 km south-west of Willows

7 Work out the direct flying distance between:

a. Tanin and Willows 15 km

b. Red Rock and Springvale 42 km

c. Yarra and Clear Springs 21 km

d. Lewis and Springvale 34 km

8 The road distances on the map are in kilometres. Work out the shortest road distance between:

a. Lewis and Clear Springs 51 km

b. Willows and Red Rock 58 km

c. Lewis and Sterling 61 km

9 Work out how much further it is by car than plane from Red Rock to:

a. Lewis 13 km **b.** Springvale 27 km

10 Complete the directions on the compass rose.

STATISTICS & PROBABILITY

CHANCE

11 **a.** Two dice are rolled and the scores added. Complete the table to show the different totals.

2nd die \ 1st die	⚀	⚁	⚂	⚃	⚄	⚅
⚀	2	3	4	5	6	7
⚁	3	4	5	6	7	8
⚂	4	5	6	7	8	9
⚃	5	6	7	8	9	10
⚄	6	7	8	9	10	11
⚅	7	8	9	10	11	12

b. What is the greatest possible total? 12

c. What is least possible total? 2

d. Which total occurs most often? 7

e. Write the probability of these totals. 10 $\frac{3}{36}$ 4 $\frac{3}{36}$ 8 $\frac{5}{36}$

TESTER

Imagine the temperature was 4°C.

Which temperature is 11°C lower?

Colour one bubble.

- (●) –7°C
- ( ) –15°C
- ( ) 7°C
- ( ) 15°C

PARENT/CARER SIGNATURE _____

NAME _____

STEP IT UP! 27

MENTAL MATHS

ADDITION & SUBTRACTION

15 + 25 = 40	16 – 9 = 7	15 – 7 = 8
16 + 16 = 32	14 – 5 = 9	30 – 11 = 19
12 + 19 = 31	18 – 13 = 5	25 – 14 = 11
14 + 14 = 28	21 – 7 = 14	30 – 17 = 13
35 + 35 = 70	20 – 11 = 9	26 – 13 = 13

MULTIPLICATION & DIVISION

7 × 4 = 28	96 ÷ 8 = 12	15 ÷ 5 = 3
7 × 9 = 63	48 ÷ 8 = 6	30 ÷ 5 = 6
7 × 8 = 56	128 ÷ 8 = 16	10 ÷ 5 = 2
7 × 7 = 49	80 ÷ 8 = 10	45 ÷ 5 = 9
7 × 3 = 21	56 ÷ 8 = 7	50 ÷ 5 = 10

NUMBER & ALGEBRA

NUMBER & PLACE VALUE

1 **a.** Write the numbers **100 less** and **100 more**.

100 less	52 329	39 956	259 900
	52 429	40 056	260 000
100 more	52 529	40 156	260 100

b. Write the numbers **1000 less** and **1000 more**.

1000 less	74 400	93 999	102 010
	75 400	94 999	103 010
1000 more	76 400	95 999	104 010

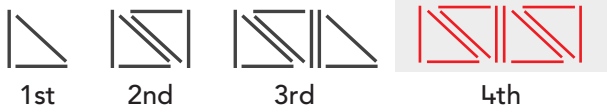
FRACTIONS & DECIMALS

2 Complete the table to show equivalent fractions, decimals and percentages.

Fraction	Decimal	Percentage
$\frac{3}{4}$	0.75	75%
$\frac{1}{10}$	0.1	10%
$\frac{79}{100}$	0.79	79%

PATTERNS & ALGEBRA

3 Draw the 4th picture. Write the number of toothpicks then write the pattern rule.



1st 2nd 3rd 4th

Picture	1	2	3	4	5	10
Toothpicks	3	6	9	12	15	30

Rule ⟶ Picture number x 3

1st 2nd 3rd 4th

Picture	1	2	3	4	5	10
Toothpicks	3	5	7	9	11	21

Rule ⟶ Picture number x 2 + 1

4 **a.** Draw the 4th picture then complete the table.

1st 2nd 3rd 4th

Picture number	1	2	3	4	5	10
Number of dots added	2	4	6	8	10	20
Total	2	6	12	20	30	110

b. Write a rule for the total dots in any given picture.

Rule ⟶ Picture number x 1 more than the picture number

c. Use your rule above to work out the total number of dots in these pictures.

25th 650 30th 930

d. 132 is an oblong number. What position in the sequence is this number? 11th

e. Write how you know 132 is an oblong number.

Because 11 x 12 = 132

i A **prism** is a 3D object that has two parallel bases that are the same shape and size. The bases are usually connected by a ring of rectangles (oblongs or squares).

* Answers will vary.

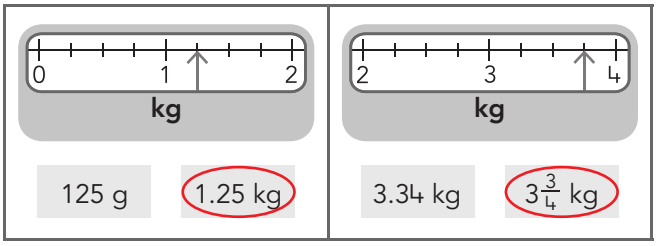
MEASUREMENT & GEOMETRY

USING UNITS OF MEASUREMENT

5 Convert these masses.

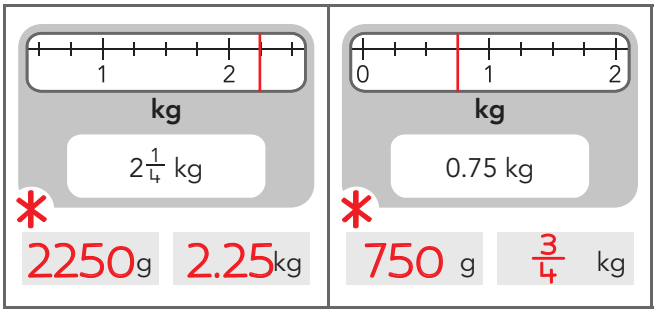
$\frac{1}{4}$ kg	250 g	200 g	0.2 kg
1.5 kg	1500 g	1.75 kg	1750 g
500 g	0.5 kg	$\frac{3}{5}$ kg	600 g
750 g	0.75 kg	$1\frac{1}{2}$ kg	1500 g

6 Loop the amount shown on the scale.



125 g | (1.25 kg) | 3.34 kg | ($3\frac{3}{4}$ kg)

7 Draw a needle to show each mass. Then write the mass in 2 other ways.

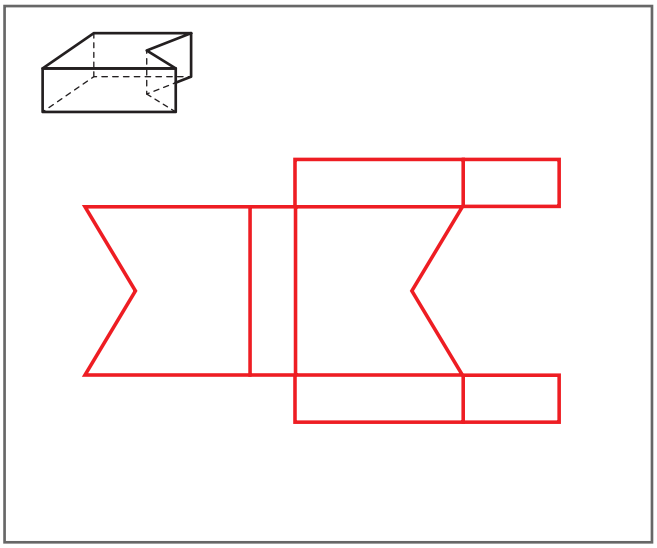


* 2250g | 2.25kg

* 750 g | $\frac{3}{4}$ kg

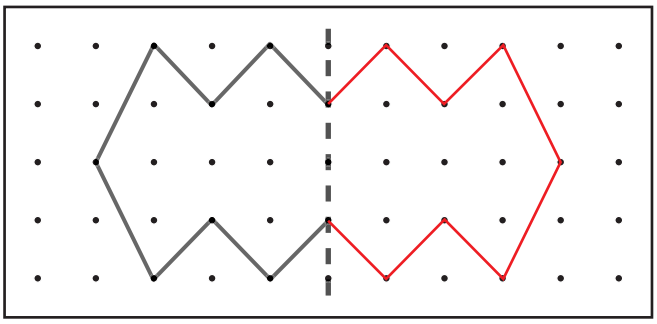
SHAPE

8 Draw a net for this prism. *



LOCATION & TRANSFORMATION

9 Draw a reflection on the other side of the dashed line.

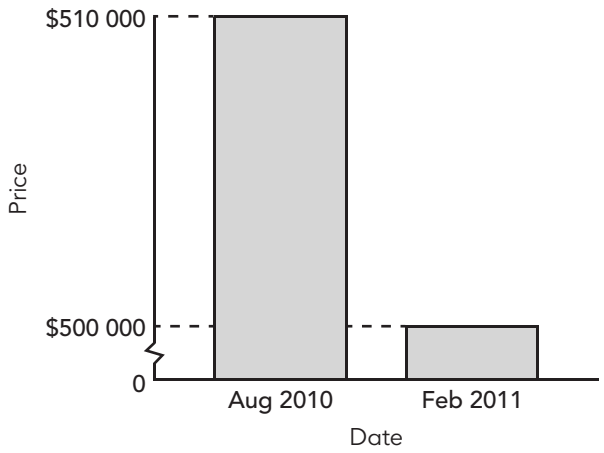


STATISTICS & PROBABILITY

DATA REPRESENTATION & INTERPRETATION

10 * This graph accurately presents the average house price in Melbourne. Explain how it could be misleading.

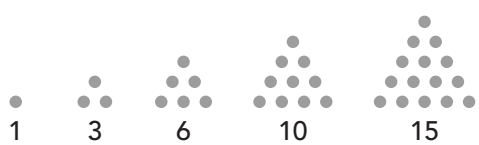
The scale used makes the difference in prices look really big when it is not that much more.



TESTER

What is the next triangular number?

- ☐ 25
- ☐ 16
- ☑ 21
- ☐ 20



Colour one bubble.

PARENT/CARER SIGNATURE _____

NAME _____

STEP IT UP! 28

MENTAL MATHS

ADDITION & SUBTRACTION

8 + 22 = 30	23 – 4 = 19	25 – 17 = 8
17 + 14 = 31	25 – 8 = 17	31 – 6 = 25
15 + 19 = 34	35 – 8 = 27	30 – 14 = 16
20 + 30 = 50	36 – 12 = 24	35 – 15 = 20
18 + 18 = 36	50 – 27 = 23	40 – 13 = 27

MULTIPLICATION & DIVISION

2 × 19 = 38	16 × 8 = 128	24 ÷ 2 = 12
2 × 13 = 26	40 × 8 = 320	30 ÷ 2 = 15
2 × 18 = 36	64 × 8 = 512	100 ÷ 2 = 50
2 × 15 = 30	80 × 8 = 640	50 ÷ 2 = 25
2 × 14 = 28	24 × 8 = 192	28 ÷ 2 = 14

NUMBER & ALGEBRA

NUMBER & PLACE VALUE

1 Look at this piece of hundred board.

11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50

a. Draw a red square around the square numbers.

b. Draw a blue triangle around the triangular numbers.

c. Draw a green circle around the oblong numbers.

d. Draw a black circle around the prime numbers.

FRACTIONS & DECIMALS

2 Write the missing parts that match.

$\frac{4}{5}$ =	$\frac{80}{100}$ =	0.80 =	80 %
$1\frac{3}{10}$ =	$\frac{130}{100}$ =	1.30 =	130 %
$1\frac{5}{20}$ =	$\frac{125}{100}$ =	1.25 =	125 %
$1\frac{3}{5}$ =	$\frac{160}{100}$ =	1.60 =	160 %
$1\frac{9}{10}$ =	$\frac{190}{100}$ =	1.90 =	190 %
$1\frac{1}{4}$ =	$\frac{125}{100}$ =	1.25 =	125 %

MONEY & FINANCIAL MATHEMATICS

3 Calculate the total cost.

Buy 4	Buy 6
 • $10.35 $ 41.40	 • $8.95 $ 53.70
Buy 7	**Buy 8**
 • $4.87 $ 34.09	 • $3.68 $ 29.44

4 Calculate the change from $50.

• $11.45

• $26.15

Change $ 12.40

PATTERNS & ALGEBRA

5 This is a segment of Pascal's triangle.

1	6	15	20	15	6	1	Row 6
1	7	21	35	35	21	7	1 Row 7
1	8	28	56	70	56	28	8 1 Row 8
1	9	36	84	126	126	84	36 9 1 Row 9

Follow the pattern to write the numbers in Row 8 and Row 9.

Pascal's triangle is a triangular arrangement of numbers where each number is the sum (or total) of the 2 numbers directly left and right above.

MEASUREMENT & GEOMETRY

USING UNITS OF MEASUREMENT

6 **a.** Complete the mass for these multiple buys.

	×2	×5	×10	×20	×50
25 g	50 g	125 g	250 g	500 g	1250 g
	0.05 kg	0.125 kg	0.25 kg	0.5 kg	1.25 kg

	×2	×5	×10	×20	×50
90 g	180 g	450 g	900 g	1800 g	4500 g
	0.18 kg	0.45 kg	0.9 kg	1.8 kg	4.5 kg

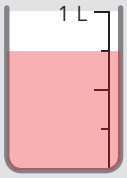
b. How many pencils balance 1 kilogram? 40

c. How many calculators have a mass that is as close as possible to 1 kilogram? 11

7 Convert these masses.

0.05 kg	50 g	175 g	0.175 kg
1.3 kg	1300 g	4103 g	4.103 kg
0.375 kg	375 g	67 g	0.067 kg

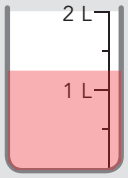
8 Shade the container to show the amount. Then write it in 2 differemt ways.



750 mL

$\frac{3}{4}$ L

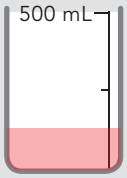
0.75 L



1250 mL

$1\frac{1}{4}$ L

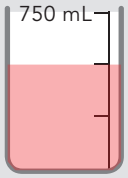
1.25 L



125 mL

$\frac{1}{8}$ L

0.125 L



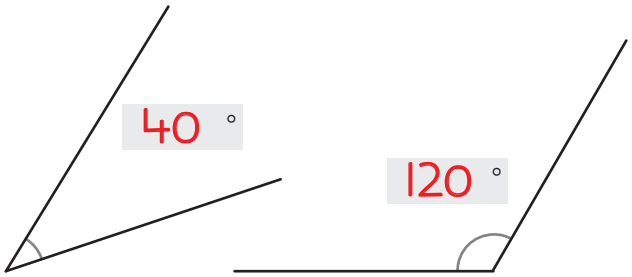
500 mL

$\frac{1}{2}$ L

0.5 L

GEOMETRIC REASONING

9 Use a protractor to measure these angles.



STATISTICS & PROBABILITY

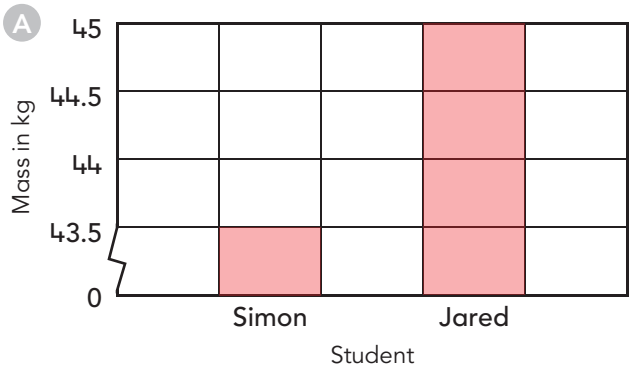
DATA REPRESENTATION & INTERPRETATION

10 **a.** Use this data to complete these 2 basic bar graphs.

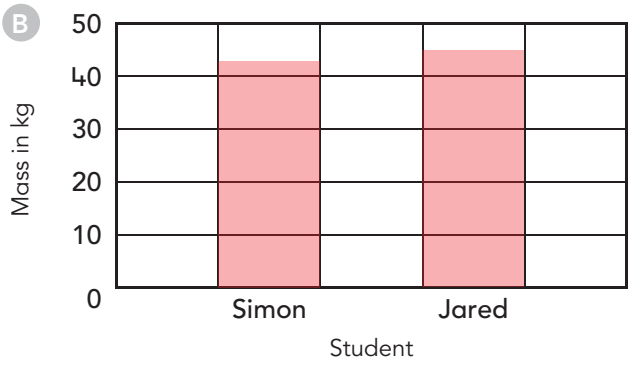
Simon
43.5 kg

Jared
45 kg

A



B



b. Which graph do you think is misleading? Explain how. A

The scale used makes the difference look much greater when it is only small.

TESTER

A plane takes off at 9:45 a.m. and lands at 2:27 p.m. on the same day.

How long does the flight take?

- (●) 4 h 42 min
- ( ) 5 h 18 min
- ( ) 7 h 18 min
- ( ) 5 h 42 min

Colour one bubble.

PARENT/CARER SIGNATURE _____

NAME _____

STEP IT UP! 29

MENTAL MATHS

ADDITION & SUBTRACTION

42 + 9 = 51	14 – 7 = 7	16 – 13 = 3
67 + 8 = 75	18 – 12 = 6	18 – 5 = 13
54 + 7 = 61	20 – 15 = 5	24 – 7 = 17
49 + 6 = 55	21 – 4 = 17	30 – 19 = 11
73 + 8 = 81	25 – 15 = 10	25 – 16 = 9

MULTIPLICATION & DIVISION

6 × 7 = 42	16 × 6 = 96	77 ÷ 11 = 7
9 × 6 = 54	6 × 19 = 114	49 ÷ 7 = 7
6 × 12 = 72	8 × 6 = 48	63 ÷ 9 = 7
15 × 6 = 90	11 × 6 = 66	84 ÷ 12 = 7
6 × 4 = 24	6 × 14 = 84	42 ÷ 6 = 7

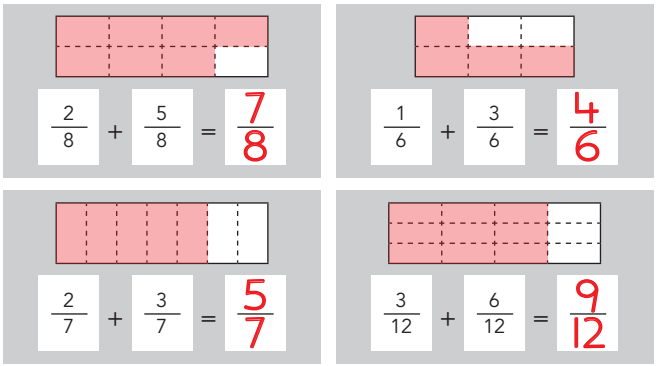
NUMBER & ALGEBRA

FRACTIONS & DECIMALS

1 Write equivalent fractions.

$\frac{3}{4}$ is the same as	$\frac{6}{8}$	$\frac{30}{40}$	$\frac{9}{12}$	$\frac{15}{20}$
$\frac{2}{5}$ is the same as	$\frac{4}{10}$	$\frac{6}{15}$	$\frac{10}{25}$	$\frac{20}{50}$
$\frac{1}{3}$ is the same as	$\frac{2}{6}$	$\frac{3}{9}$	$\frac{5}{15}$	$\frac{10}{30}$

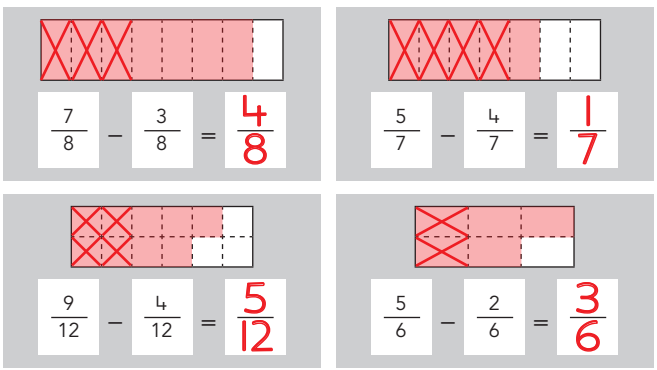
2 Shade the area models to help you add these common fractions.



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

$\frac{2}{7} + \frac{3}{7} = \frac{5}{7}$ $\quad \frac{3}{12} + \frac{6}{12} = \frac{9}{12}$

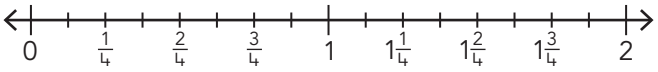
3 Use these area models to help you subtract these common fractions.



$\frac{7}{8} - \frac{3}{8} = \frac{4}{8}$ $\quad \frac{5}{7} - \frac{4}{7} = \frac{1}{7}$

$\frac{9}{12} - \frac{4}{12} = \frac{5}{12}$ $\quad \frac{5}{6} - \frac{2}{6} = \frac{3}{6}$

4 Use the number line to help add and subtract.



$\frac{2}{4} + \frac{3}{4} = 1\frac{1}{4}$	$\frac{3}{4} + \frac{3}{4} = 1\frac{2}{4}$
$1\frac{1}{4} + \frac{1}{4} = 1\frac{2}{4}$	$\frac{2}{4} + \frac{5}{4} = 1\frac{3}{4}$
$\frac{3}{4} - \frac{2}{4} = \frac{1}{4}$	$1\frac{1}{4} - \frac{3}{4} = \frac{2}{4}$
$1 - \frac{2}{4} = \frac{2}{4}$	$1\frac{3}{4} - \frac{5}{4} = \frac{2}{4}$

PATTERNS & ALGEBRA

5 Use this order of operations to solve these.

- Perform any operations inside brackets,
- then multiply or divide working left to right,
- then add or subtract working left to right.

3 + 8 × 5 =	3 + 40	= 43
(11 – 4) × 5 =	7 x 5	= 35
12 – 3 + 6 =	9 + 6	= 15
12 ÷ 4 × 3 =	3 x 3	= 9
5 + (3 × 10) ÷ 5 =	5 + 30 ÷ 5	= 11

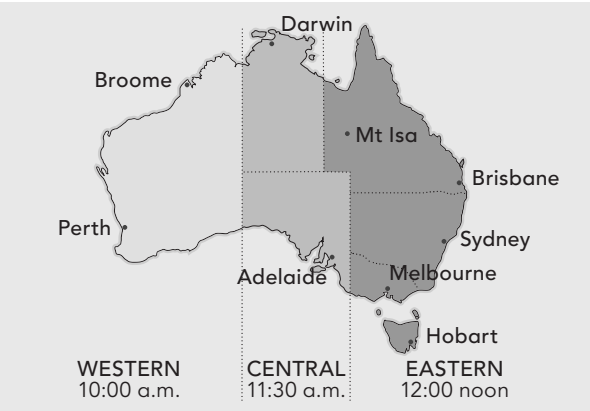
You can find an **equivalent fraction** by multiplying (or dividing) the numerator and denominator by the same number.

✱ Answers will vary.

MEASUREMENT & GEOMETRY

USING UNITS OF MEASUREMENT

6 This map of Australia shows our 3 time zones.



a. From this map list the cities in each time zone.

Eastern ⟶ Mt Isa, Brisbane, Sydney, Melbourne, Hobart

Central ⟶ Darwin and Adelaide

Western ⟶ Broome and Perth

b. Write **add** or **subtract**.

Move east across time zones: add time

Move west across time zones: subtract time

7 Write the time in the other city.

Melbourne	Adelaide
6:00 p.m.	5:30 p.m.
8:00 a.m.	7:30 a.m.
10:30 a.m.	10:00 a.m.
2:50 p.m.	2:20 p.m.

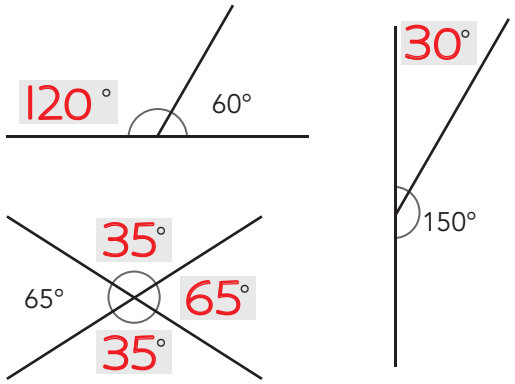
Adelaide	Broome
9:00 p.m.	7:30 p.m.
8:30 a.m.	7:00 a.m.
12 noon	10:30 a.m.
7:15 a.m.	5:45 a.m.

Mt. Isa	Perth
12 midnight	10:00 p.m.
8:00 p.m.	6:00 p.m.
10:00 a.m.	8:00 a.m.
5:45 p.m.	3:45 p.m.

Darwin	Sydney
4:00 p.m.	4:30 p.m.
11:30 p.m.	12 midnight
11:45 a.m.	12:15 p.m.
7:40 a.m.	8:10 a.m.

GEOMETRIC REASONING

8 Calculate the size of each missing angle.



STATISTICS & PROBABILITY

CHANCE

9 **a.** Predict the number of heads and tails you would get if you tossed a coin 4 times.

b. Toss a coin 4 times and record the results.

Prediction:	**Heads**	2	**Tails**	2
✱ Result:	**Heads**		**Tails**	

c. Were the results what you expected? Explain.

✱

10 **a.** Repeat the activity for 20 tosses.

Prediction:	**Heads**	10	**Tails**	10
✱ Result:	**Heads**		**Tails**	

b. Were the results what you expected? Explain.

✱

TESTER

Ten friends equally shared the cost of this gift.
How much did they each contribute?

\$3.695 ○ \$36.95 ● \$36.59 ○ \$369.50 ○

Colour one bubble.

PARENT/CARER SIGNATURE _____

NAME _____

STEP IT UP! 30

MENTAL MATHS

ADDITION & SUBTRACTION

13 + 13 = 26	38 – 19 = 19	76 – 9 = 67
14 + 14 = 28	72 – 12 = 60	81 – 4 = 77
15 + 15 = 30	43 – 14 = 29	54 – 7 = 47
16 + 16 = 32	46 – 21 = 25	62 – 6 = 56
17 + 17 = 34	54 – 13 = 41	72 – 8 = 64

MULTIPLICATION & DIVISION

8 × 12 = 96	81 ÷ 9 = 9	71 ÷ 10 = 7.1
7 × 8 = 56	99 ÷ 11 = 9	190 ÷ 100 = 1.9
8 × 21 = 168	135 ÷ 9 = 15	0.2 ÷ 10 = 0.02
13 × 8 = 104	108 ÷ 12 = 9	6.5 ÷ 10 = 0.65
8 × 9 = 72	36 ÷ 9 = 4	4 ÷ 10 = 0.4

NUMBER & ALGEBRA

FRACTIONS & DECIMALS

1 Write equivalent fractions.

$\frac{5}{6}$	is the same as	$\frac{10}{12}$	$\frac{25}{30}$	$\frac{50}{60}$	$\frac{15}{18}$
$\frac{6}{8}$	is the same as	$\frac{12}{16}$	$\frac{30}{40}$	$\frac{60}{80}$	$\frac{3}{4}$

2 Add and subtract these.

$\frac{3}{7} + \frac{2}{7} = \frac{5}{7}$	$\frac{1}{5} + \frac{3}{5} = \frac{4}{5}$
$\frac{5}{6} + \frac{2}{6} = \frac{7}{6}$	$\frac{7}{8} + \frac{4}{8} = \frac{11}{8}$
$\frac{4}{5} - \frac{2}{5} = \frac{2}{5}$	$\frac{8}{9} - \frac{4}{9} = \frac{4}{9}$
$1\frac{3}{5} - \frac{4}{5} = \frac{4}{5}$	$1\frac{3}{6} - \frac{5}{6} = \frac{4}{6}$

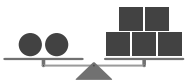
3 Change one fraction so that both fractions have the same denominator. Then write the answer.

$\frac{1}{3} + \frac{3}{6} = \frac{2}{6} + \frac{3}{6} = \frac{5}{6}$	
$\frac{4}{8} + \frac{1}{4} = \frac{4}{8} + \frac{2}{8} = \frac{6}{8}$	
$\frac{1}{5} + \frac{3}{10} = \frac{2}{10} + \frac{3}{10} = \frac{5}{10}$	
$\frac{7}{8} - \frac{1}{2} = \frac{7}{8} + \frac{4}{8} = \frac{3}{8}$	
$\frac{7}{9} - \frac{1}{3} = \frac{7}{9} + \frac{3}{9} = \frac{4}{9}$	

PATTERNS & ALGEBRA

4 Write the missing values.

●	■
1	2
5	10
15	30
25	50
100	200

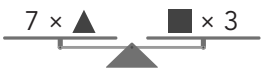


●	■
5	2
15	6
20	8
35	14
50	20

●	■
15	5
3	1
9	3
30	10
75	25

●	■
1	3
3	9
10	30
15	45
20	60

▲	■
5	4
10	8
20	16
40	32
100	80



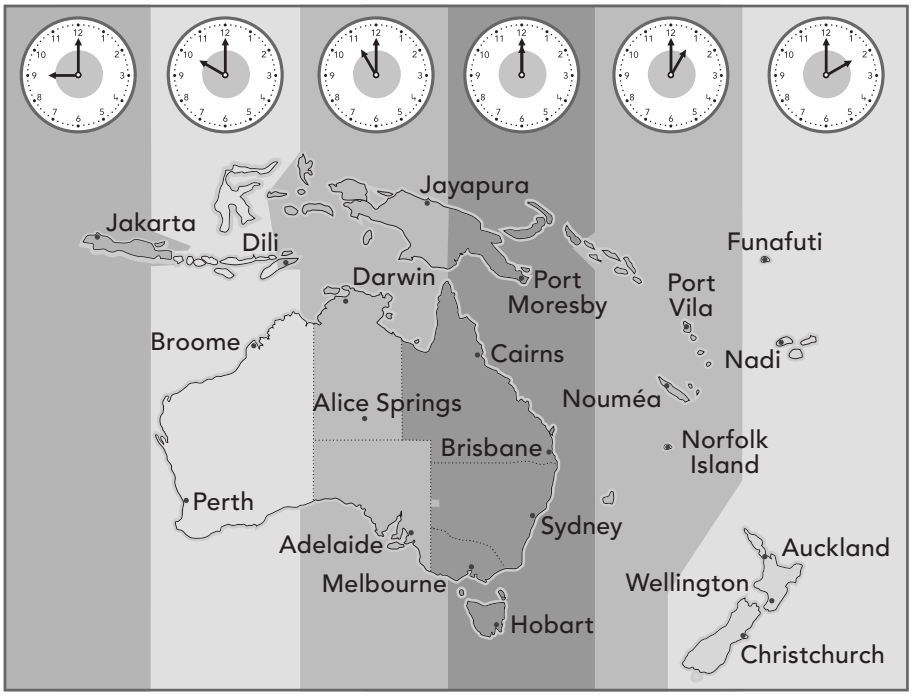
▲	■
3	7
6	14
9	21
24	56
30	70

When you **add or subtract common fractions**, the denominators must be the same. You can use equivalent fractions to make any changes that are needed.

✱ Answers will vary. This is one example.

MEASUREMENT & GEOMETRY

USING UNITS OF MEASUREMENT



5 Write a place that is:

- ✱ 3 hours ahead of Perth — Port Vila
- 2 hours behind Darwin — Jakarta
- 5 hours behind Auckland — Jakarta
- ✱ 4 hours ahead of Jakarta — Port Vila
- ✱ 1 hour behind Port Vila — Cairns

6 It is 12:15 a.m. on Friday in Port Moresby. ✱

a. Name 2 places where it is still Thursday night.
Darwin, Dili

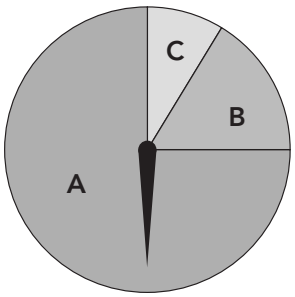
b. Name 2 places where it is the same time.
Brisbane, Sydney

c. Name 2 places where it is 2:15 a.m. on Friday.
Nadi, Auckland

STATISTICS & PROBABILITY

CHANCE

7 Imagine you use this spinner 100 times.
Loop the table that shows the most likely results.



Letter	Number of Spins
A	72
B	18
C	10

Letter	Number of Spins
A	50
B	40
C	10

Letter	Number of Spins
A	70
B	10
C	20

TESTER

Peter has 8 red cars and 2 blue cars.

What fraction of the cars are red?

Colour one bubble.

$\frac{2}{8}$ $\frac{6}{8}$ $\frac{4}{5}$ $\frac{2}{10}$

PARENT/CARER SIGNATURE _____

✱ Answers will vary. This is one example.

NAME _____

STEP IT UP! 31

MENTAL MATHS

ADDITION & SUBTRACTION

58 + 14 = 72	93 + 15 = 78	18 – 5 = 13
75 + 15 = 90	13 + 52 = 65	25 – 8 = 17
14 + 16 = 30	45 + 14 = 59	27 – 11 = 16
33 + 17 = 50	12 + 35 = 47	30 – 16 = 14
64 + 18 = 82	80 + 16 = 96	21 – 7 = 14

MULTIPLICATION & DIVISION

8.3 × 10 = 83	1.7 × 10 = 17	49 ÷ 7 = 7
0.9 × 10 = 9	0.8 × 10 = 8	81 ÷ 9 = 9
0.12 × 10 = 1.2	2.4 × 10 = 24	36 ÷ 6 = 6
0.4 × 100 = 40	0.2 × 10 = 2	64 ÷ 8 = 8
6.7 × 100 = 670	0.61 × 10 = 6.1	100 ÷ 10 = 10

NUMBER & ALGEBRA

FRACTIONS & DECIMALS

1 Add or subtract to complete these sequences.

Add one-tenth	Subtract one-hundredth
19.878	6.307
19.978	6.297
20.078	6.287
20.178	6.277
20.278	6.267
20.378	6.257

Add one-thousandth	Subtract five-thousandths
19.997	0.517
19.998	0.512
19.999	0.507
20.000	0.502
20.001	0.497
20.002	0.492

2 Write the equivalent fractions. ✱

$\frac{1}{4}$	$\frac{25}{100}$ =	$\frac{4}{8}$	$\frac{1}{5}$	$\frac{20}{100}$ =	$\frac{2}{10}$
$\frac{2}{4}$	$\frac{50}{100}$ =	$\frac{1}{2}$	$\frac{2}{5}$	$\frac{40}{100}$ =	$\frac{4}{10}$
$\frac{3}{4}$	$\frac{75}{100}$ =	$\frac{6}{8}$	$\frac{3}{5}$	$\frac{60}{100}$ =	$\frac{6}{10}$
$\frac{1}{20}$	$\frac{5}{100}$ =	$\frac{25}{500}$	$\frac{4}{5}$	$\frac{80}{100}$ =	$\frac{8}{10}$

3 Write these in order from least to greatest.

$\frac{1}{2}$	40%	0.15	$\frac{6}{10}$	25%	$\frac{4}{100}$	0.75
$\frac{4}{100}$	0.15	25%	40%	$\frac{1}{2}$	$\frac{6}{10}$	0.75

4 Write these in order from greatest to least.

15%	$\frac{3}{4}$	0.85	60%	$\frac{7}{10}$	0.5	35%
0.85	$\frac{3}{4}$	$\frac{7}{10}$	60%	0.5	35%	15%

PATTERNS & ALGEBRA

5 Write the missing numbers in these machines.

IN			OUT
4	×4	16	÷10 → 1.6
20		80	→ 8
7		28	→ 2.8
31		124	→ 12.4

IN			OUT
3	×7	21	÷100 → 0.21
10		70	→ 0.7
70		490	→ 4.9
6		42	→ 0.042

IN			OUT
7	×9	63	÷1000 → 0.063
50		450	→ 0.45
100		900	→ 0.9
600		5400	→ 5.4

When **dividing by 10, 100 or 1000** the digits move 1 (÷10), 2 (÷100), or 3 (÷1000) places to the right.

✱ Answers will vary. This is one example.

MEASUREMENT & GEOMETRY

USING UNITS OF MEASUREMENT

6 Write each list in order from greatest to least.

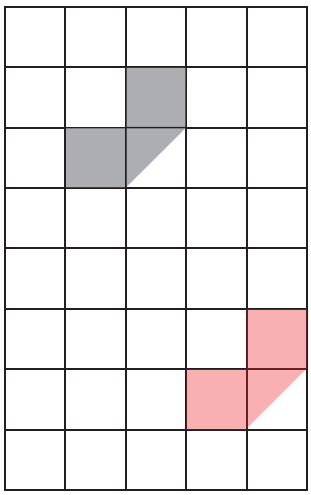
1.5 L	750 mL	0.8 L	0.09 L	825 mL
1.5 L	825 mL	0.8 L	750 mL	0.09 L

350 mL	45 mL	0.05 L	0.4 L	1.005 L
1.005 L	0.4 L	350 mL	45 mL	0.05 L

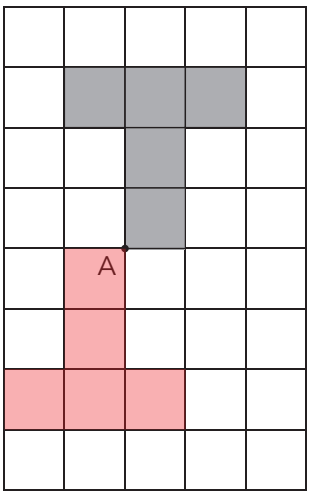
LOCATION & TRANSFORMATION

7 Redraw the shape in its new position.

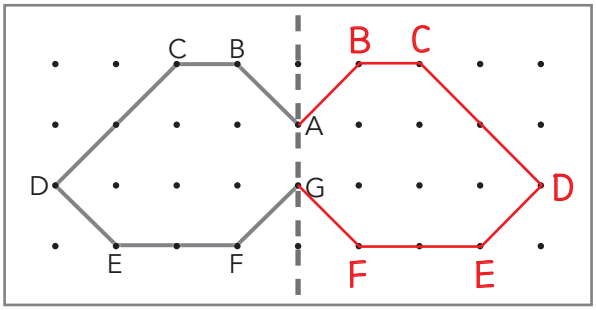
Slide down 4 squares then right 2 squares.

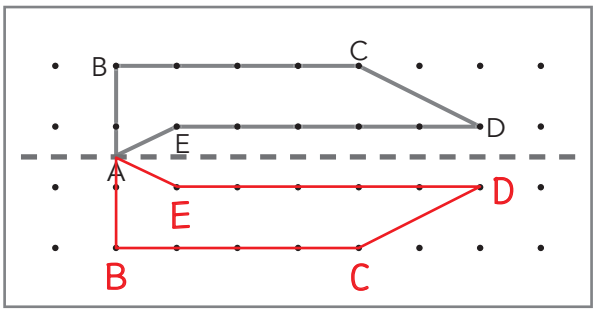


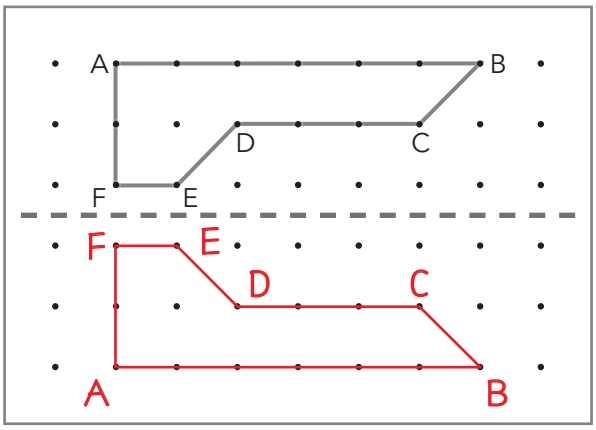
Rotate clockwise 180° around point A.



8 Draw the reflection. Label the vertexes.





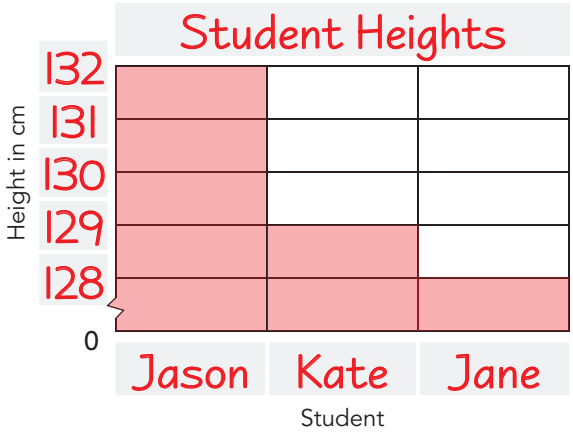


STATISTICS & PROBABILITY

DATA REPRESENTATION & INTERPRETATION

9 **a.** Use this data to complete the bar graph.

Student Heights	
Jason	132 cm
Kate	129 cm
Jane	128 cm



✱

b. Explain how the bar graph could be misleading.

The scale used makes the difference appear greater than it is.

TESTER

Five people won an equal share of $118.
How much did they each win?

$23.60

Write your answer in the box.

PARENT/CARER SIGNATURE _____

NAME _____

STEP IT UP! 32

MENTAL MATHS

ADDITION & SUBTRACTION

35 + 36 = 71	26 + 26 = 52	80 – 45 = 35
46 + 47 = 93	34 + 34 = 68	90 – 55 = 35
28 + 29 = 57	36 + 36 = 72	60 – 25 = 35
17 + 18 = 35	46 + 46 = 92	70 – 15 = 55
36 + 37 = 73	33 + 33 = 66	50 – 35 = 15

MULTIPLICATION & DIVISION

7 × 8 = 56	12 × 13 = 156	120 ÷ 10 = 12
8 × 9 = 72	13 × 14 = 182	35 ÷ 10 = 3.5
9 × 10 = 90	14 × 15 = 210	72 ÷ 10 = 7.2
10 × 11 = 110	15 × 16 = 240	17 ÷ 10 = 1.7
11 × 12 = 132	16 × 17 = 272	150 ÷ 10 = 15

NUMBER & ALGEBRA

MONEY & FINANCIAL MATHEMATICS

1 Calculate the new price with a discount of $\frac{1}{4}$ off.

$92

New price = $ 69

$56

New price = $ 42

2 Calculate the amount of discount and the new price.

$250 — 10% off

10% of $250 is = $ 25

New price = $ 225

$490 — 20% off

20% of $490 is = $ 98

New price = $ 392

$1200 — 25% off

25% of $1200 is = $300

New price = $ 900

$1800 — 15% off

15% of $1800 is = $270

New price = $ 1530

3 Calculate the savings.

	25% off	20% off
 $690	$172.50	$138

	5% off	15% off
 $90	$4.50	$13.50

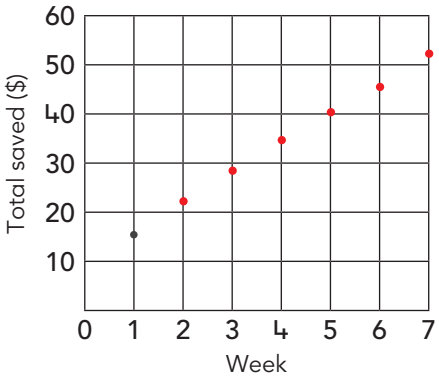
PATTERNS & ALGEBRA

4 John already has $10 and saves $6 every week.

a. Complete the table to show how much money he has each week.

Week	1	2	3	4	5	6	7	10
Total saved	$16	$22	$28	$34	$40	$46	$52	$70

b. Draw dots to show this data on the graph.



c. Write a rule to work out the total saved for any week.

Week number x $6 + $10

d. Use your rule to find the total saved after:

20 weeks = $ 130

30 weeks = $ 190

50 weeks = $ 310

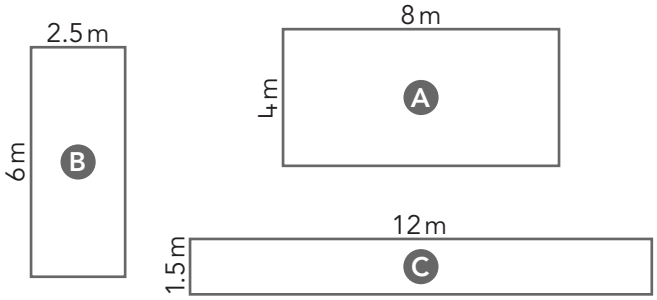
1 year = $ 322

A right angle (or quarter turn) measures 90° and a **straight line** (or half turn) measures 180°. Any 2 angles that make a straight line and share one angle arm will total 180°.

MEASUREMENT & GEOMETRY

USING UNITS OF MEASUREMENT

5 **a.** Calculate the perimeter and surface area of each swimming pool.



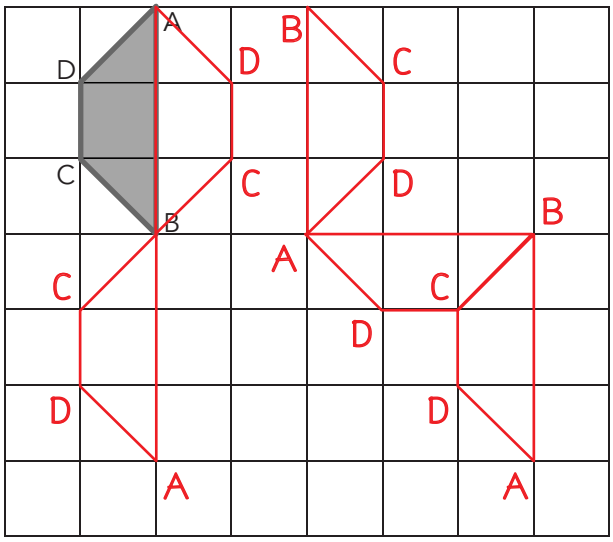
Pool	Perimeter	Surface Area
A	24 m	32 m²
B	17 m	15 m²
C	27 m	18 m²

b. The material to make a thermal cover for each pool costs $30 for each square metre. Calculate the cost of each pool cover.

Pool Cover A	Pool Cover B	Pool Cover C
$ 960	$ 450	$ 540

LOCATION & TRANSFORMATION

6 Follow the instructions. Draw the polygon at each new position and label the vertexes.



1. Flip across AB.
2. Rotate anticlockwise 180° around point B.
3. Slide right 5 squares.
4. Flip across BC.
5. Rotate anticlockwise 90° around point A.

STATISTICS & PROBABILITY

CHANCE

7 **a.** Complete this table to show all the combinations for each total when rolling 2 dice.

1	2	3	4
	1,1	1,2 2,1	2,2 1,3 3,1

5	6	7	8
4,1 3,2 1,4 2,3	1,5 4,2 2,4 5,1 3,3	1,6 5,2 6,1 3,4 2,5 4,3	2,6 3,5 6,2 5,3 4,4

9	10	11	12
3,6 5,4 6,3 4,5	4,6 6,4 5,5	5,6 6,5	6,6

b. Write a fraction in this table to show the probability of each total when rolling 2 dice.

1	2	3	4	5	6
0	$\frac{1}{36}$	$\frac{2}{36}$	$\frac{3}{36}$	$\frac{4}{36}$	$\frac{5}{36}$

7	8	9	10	11	12
$\frac{6}{36}$	$\frac{5}{36}$	$\frac{4}{36}$	$\frac{3}{36}$	$\frac{2}{36}$	$\frac{1}{36}$

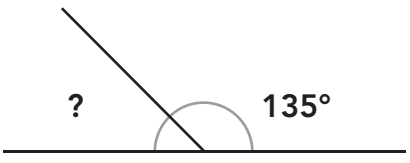
c. Write a fraction to describe each of these.

rolling an even total	rolling an odd total	rolling a prime total
$\frac{1}{2}$	$\frac{1}{2}$	$\frac{14}{36}$

TESTER

Calculate the size of the unknown angle.

45 °



Write your answer in the box.

PARENT/CARER SIGNATURE _____

NAME _____

STEP IT UP! REVIEW 4

NUMBER & ALGEBRA

NUMBER & PLACE VALUE

1 Calculate the kilometres travelled each hour.

584 km → 8 hours	876 km → 2 hours
73 km each hour	438 km each hour
516 km → 6 hours	**294 km → 3 hours**
86 km each hour	98 km each hour

2 Write the possible new temperatures.

Temperature	Change	Possible new temperatures
5°C	8°C	13 °C or −3 °C
−3°C	9°C	6 °C or −12 °C
11°C	15°C	26 °C or −4 °C
−6°C	13°C	7 °C or −19 °C

FRACTIONS & DECIMALS

3 Add or subtract to create these sequences.

Add one-hundredth	Subtract one-thousandth
9.972	1.103
9.982	1.102
9.992	1.101
10.002	1.100
10.012	1.099

4 Write equivalent fractions.

$\frac{2}{5}$ is the same as	$\frac{4}{10}$	$\frac{20}{50}$	$\frac{10}{25}$	$\frac{40}{100}$
$\frac{1}{8}$ is the same as	$\frac{2}{16}$	$\frac{5}{40}$	$\frac{10}{80}$	$\frac{15}{120}$
$\frac{2}{3}$ is the same as	$\frac{4}{6}$	$\frac{8}{12}$	$\frac{12}{18}$	$\frac{24}{36}$

5 Convert to the same denominator. Then write the answer.

$\frac{1}{4} + \frac{3}{8} = \frac{2}{8} + \frac{3}{8} = \frac{5}{8}$

$\frac{3}{10} + \frac{1}{2} = \frac{3}{10} + \frac{5}{10} = \frac{8}{10}$

$\frac{7}{8} - \frac{3}{4} = \frac{7}{8} - \frac{6}{8} = \frac{1}{8}$

$\frac{5}{6} - \frac{1}{3} = \frac{5}{6} - \frac{2}{6} = \frac{3}{6}$

MONEY & FINANCIAL MATHEMATICS

6 Calculate the new price of each item.

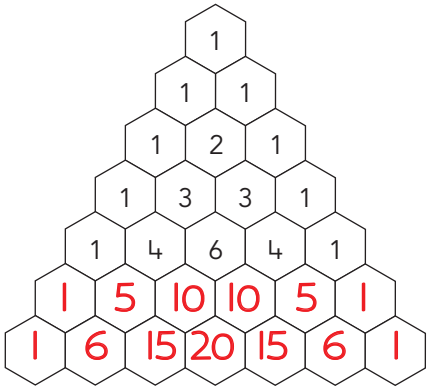
• $132	• $750
$\frac{1}{4}$ off	5% off
New price = $ 99	New price = $712.50

7 Calculate the equal monthly payments.

• $2590	• $1395
5 months	9 months
$ 518 each month	$ 155 each month

PATTERNS & ALGEBRA

8 Complete the next 2 rows of Pascals' triangle.

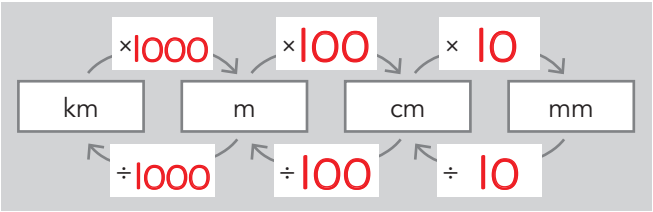


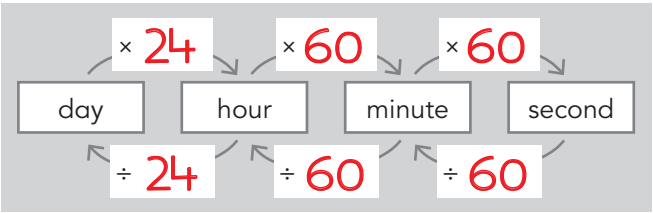
✱ Answers will vary. This is one example.

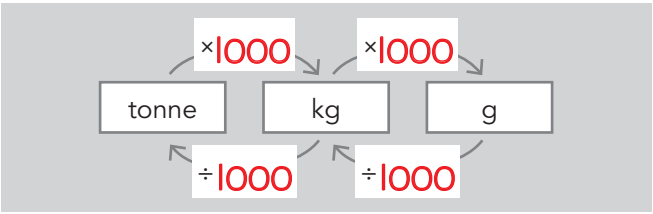
MEASUREMENT & GEOMETRY

USING UNITS OF MEASUREMENT

9 Complete these conversion charts.







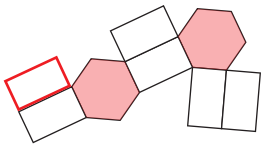
10 Write the missing times in each time zone.

Western	Central	Eastern
Perth	Adelaide	Sydney
10:00 a.m.	11:30 a.m.	12:00 noon
2:00 p.m.	3:30 p.m.	4:00 p.m.
11:15 a.m.	12:45 p.m.	1:15 p.m.
3:45 p.m.	5:15 p.m.	5:45 p.m.

SHAPE ✱

11 **a.** Draw the missing face in this prism net.

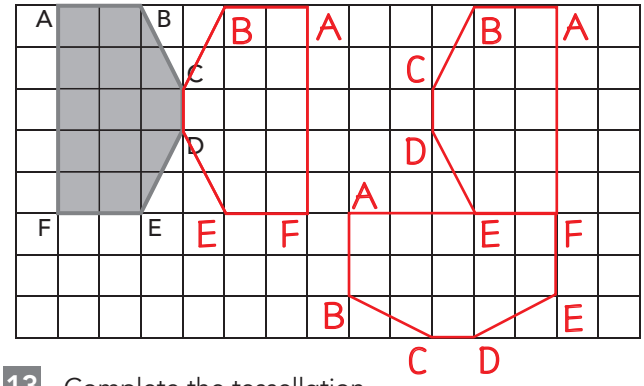
b. Colour the bases blue.



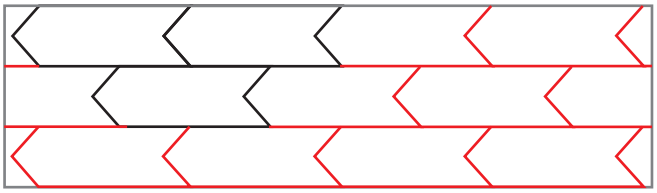
LOCATION & TRANSFORMATION

12 Follow these steps.Draw the shape in each new position. Label the vertexes.

- Flip across line CD.
- Slide right 6.
- Rotate anticlockwise 90° around point F.

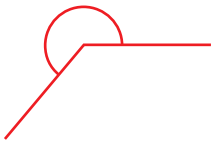


13 Complete the tessellation.



GEOMETRIC REASONING

14 Use a ruler and a protractor to draw these angles.

230°	85°
	

STATISTICS & PROBABILITY

DATA REPRESENTATION & INTERPRETATION

15 Use the graph to answer these.

a. What was the life expectancy in the year 2000? 79.2 years

b. What was the life expectancy in the year 2009? 81.5 years

c. Explain how the graph could be misleading.

The scale used makes the difference appear greater than it is.