Answers

Unit 1

Think about it!

1. 750 507
2. 264 031; two hundred and sixty-four thousand and thirty-one

Practise it!

1. (a) 80 000 + 7000 + 400 + 80 + 2
   (b) 800 000 + 10 000 + 4000 + 700 + 20 + 8
   (c) 50 000 + 900 + 70 + 3
   (d) 300 000 + 90 000 + 2000 + 10 + 5
2. (a) 900 (nine hundred)
   (b) 80 000 (eighty thousand)
   (c) 4 (four)
   (d) 100 000 (one hundred thousand)
3. (a) 40 000 (forty thousand)
   (b) 20 (twenty)
   (c) 700 000 (seven hundred thousand)
   (d) 1000 (one thousand)

Unit 2

Think about it!

1. Three hundred and twenty-eight point two eight
2. 613.31
3. '9' = 900 '3' = 30 '5' = 5 '0' = 0.0 (zero tenths) '4' = 0.04

Practise it!

1. (a) 10 + 2 + 0.9 + 0.04
   (b) 700 + 80 + 0.1 + 0.06
   (c) 40 + 2 + 0.08
2. (a) 10 (ten)
   (b) 0.5 (five tenths)
   (c) 600 (six hundred)
3. (a) 28.54 (b) 312.7 (c) 506.06

Unit 3

Think about it!

1. 7720, 7730
2. 7750

Practise it!

1.

	Rounded to the nearest 1000	Rounded to the nearest 100	Rounded to the nearest 10
3578	4000	3600	3580
1385	1000	1400	1390
5004	5000	5000	5000
9945	10000	9900	9950

2. (a) 7.54
   (b) 8.5, 9.45
   (c) 11.49

Unit 4

Think about it!

1. 5
2. $-5 < 4$

Practise it!

1. (a) 0.9 m (b) 4.2 m (c) 3.3 m (d) 2.8 m
2. (a) -6° C (b) -6° C, -3° C, 0° C, 4° C, 5° C
3. (a) 990 715 is greater than 455 011
   (b) 855 900 is less than 897 410
   (c) 98 150 is greater than 91 899
   (d) 500 779 is less than 686 500
   (e) 295 420 is greater than 100 182

Unit 5

Think about it!

1. (a) 0.1 (b) 0.6 (c) Add 0.5
2. (a) Add 3, or Multiply by 2 (Double)
   (b) 9, or 12
   (c) Multiply by 2, Double or Add 3.

Practise it!

1.

Number sequence	64, 32, 16, 8, 4
First term	64
Second term	32
Third term	16
Fourth term	8
Fifth term	4
Rule	Divide by 2 (halve it)

2. (a) 990 (b) 297 (c) 8080
3. (a) 93, 97, 101, 105, 109, 113
   (b) 96, 48, 24, 12, 6, 3
   (c) 2, 10, 50, 250, 1250, 6250
   (d) 41, 31, 21, 11, 1, -9

Unit 6

Think about it!

1. (c)
2. The difference between two odd numbers is always even.

Practise it!

1. (a) True
   (b) True
   (c) False. Counter example, e.g. $5 \times 2 = 10$
   (d) True
   (e) False. Counter example, e.g. $5 - 2 = 3$
2. Two general statements could include:
   All multiples of 25 are also multiples of 5.
   All multiples of 100 are also multiples of 25.
   All multiples of 25 end with either 0 or 5.

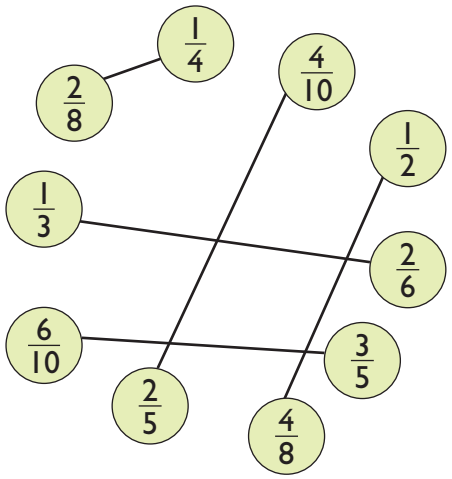
Unit 7

Think about it!

1. (a) $\frac{4}{10} = \frac{2}{5}$ (b) $\frac{9}{100}$ (c) $\frac{49}{100}$
2. (a) $\frac{1}{2}$
   (b) $\frac{2}{3}$

Practise it!

1.



2. (a) > (b) = (c) < (d) <

Unit 8

Think about it!

1. (a) $4\frac{1}{3}$ $\frac{13}{3}$ (b) $5\frac{1}{2}$ $\frac{11}{2}$

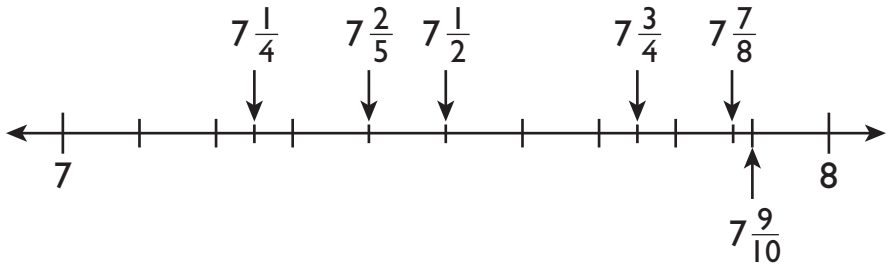
Practise it!

1.

Improper fraction	Mixed number
$\frac{7}{4}$	$1\frac{3}{4}$
$\frac{13}{2}$	$6\frac{1}{2}$
$\frac{21}{10}$	$2\frac{1}{10}$
$\frac{7}{2}$	$3\frac{1}{2}$
$\frac{9}{4}$	$2\frac{1}{4}$

2. (a) $3\frac{1}{3}$ (b) $2\frac{5}{6}$ (c) $3\frac{3}{5}$ (d) $7\frac{3}{8}$

3.



Unit 9

Think about it!

1. 13%
2. (a) 50% (b) 21% (c) 40%
3. (a) $\frac{1}{10}$ (b) $\frac{53}{100}$ (c) $\frac{3}{10}$

Practise it!

1. (a) 175 g (b) 21.5 cm (c) 0.75 litres / 750 ml
2. (a)

Percentage	100%	10%	50%	20%	5%	60%
Number	70	7	35	14	3.5	42

(b)

Percentage	100%	10%	50%	20%	5%	60%
Number	120	12	60	24	6	72

3. (a) $120 (b) $18 (c) $39

Unit 10

Think about it!

1. (a) There are 2 white fish in every 3 fish.
   (b) There are 2 white fish for every 1 orange fish.
   (c) $\frac{2}{3}$

Practise it!

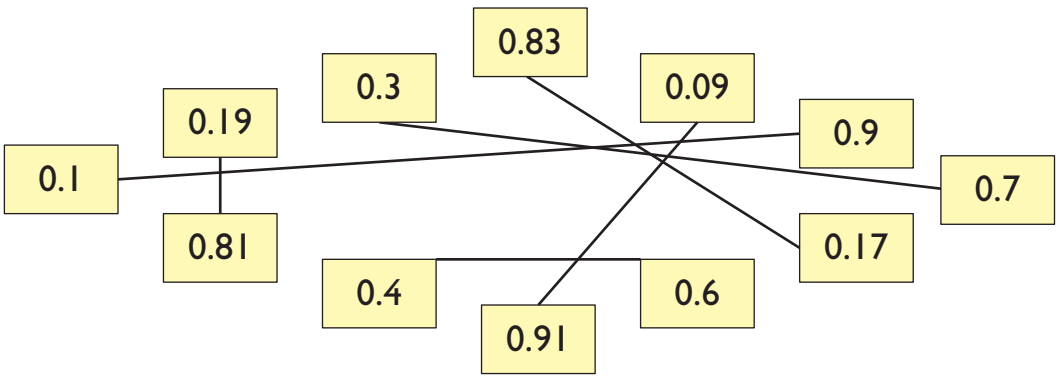
1. (a) 6 beads coloured yellow, 8 beads coloured green
   (b) 10 beads coloured purple, 4 beads coloured red
   (c) 2 beads coloured blue, 12 beads coloured orange
2. (a) 6 tomatoes, 4 red onions, 2 chillies, 2 limes
   (b) $1\frac{1}{2}$ tomatoes, 1 red onion, $\frac{1}{2}$ chilli, $\frac{1}{2}$ lime
   (c) $7\frac{1}{2}$ tomatoes, 5 red onions, $2\frac{1}{2}$ chillies, $2\frac{1}{2}$ limes

Unit 11

Think about it!

1. (a) + (b) – (c) + (d) –

Practise it!

1. (a) 1 (b) 2.2 (c) 1755 (d) 9179
2. 

Unit 12

Think about it!

1. (a) 2658 (b) 1119

Practise it!

1. (a) $21.03 (b) $39.48
2. (a) 8°C (b) 17°C (c) 18°C (d) 25°C

Unit 13

Think about it!

1. 11
2. Any 5 multiples of 100.
3. 1, 4, 9, 16, 25, 36, 49, 64, 81

Practise it!

1.

Multiples of 2	Multiples of 5	Multiples of 10	Multiples of 100
4, 18, 20, 200, 426, 570, 1300	15, 20, 45, 200, 570, 1300	20, 200, 570, 1300	200, 1300

2. Blue: 36, 42, 48, 54, 60, 66, 72, 78, 84, 90
   Yellow: 35, 42, 49, 56, 63, 70, 77, 84
   Green: 32, 40, 48, 56, 64, 72, 80, 88
   Red: 36, 45, 54, 63, 72, 81, 90
3. (a) 1, 3, 9, 27 (b) 1, 2, 3, 4, 6, 8, 12, 24
   (c) 1, 2, 3, 6, 9, 18 (d) 1, 2, 3, 5, 6, 10, 15, 30

Unit 14

Think it!

1. (a) 80 000 (b) 5.5
2. (a) 2000 (b) 5400
3. (a) 2000 (b) 4800

Practise it!

1. (a) 0.3, 30, 0.03, 300
   (b) 40.9, 4090, 4.09, 40900
   (c) 206, 20600, 20.6, 206000
2. (a) 7×700 (b) 3×500
   (c) 4×900 (d) 3×800, 4×600
3. (a) 5600 (b) 40

Unit 15

Think about it!

1. (a) 46 (b) 128 (c) 74
   (d) 720 (e) 1560 (f) 18 400

Practise it!

1.

	double	double again	double again
3	6	12	24
11	22	44	88
35	70	140	280
19	38	76	152
14.5	29	58	116

2. (a) 140 (b) 152 (c) 116
   (d) 152 (e) 58 (f) 35
3. $23 \times 16 = 23 \times 8 \times 2$
   $34 \times 12 = 34 \times 6 \times 2$
   $23 \times 60 = 23 \times 6 \times 10$
   $34 \times 16 = 34 \times 8 \times 2$
   $16 \times 12 = 16 \times 6 \times 2 = 12 \times 8 \times 2$

Unit 16

Think about it!

1. (a) 17 (b) 2 (c) $\frac{2}{5}$
2. 3, 7, 11, 15, 19, 23, 27, 31, 35, 39, 43, 47
   All of the numbers are 3 more than a multiple of four. The grid is in rows of 8 so all of the multiples of 4 are in vertical lines, and all of the numbers that are 3 more than a multiple of 4 are in vertical lines.

Practise it!

1. (a) 18 remainder 5
   (b) 21 remainder 2
   (c) 28 remainder 3
   (d) 21 remainder 2
   (e) 26 remainder 7
2. (a) $22\frac{2}{3}$ (b) $19\frac{1}{4}$
   (c) $13\frac{1}{7}$ (d) $13\frac{3}{6}$ or $13\frac{1}{2}$
   (e) $0\frac{7}{9}$ or $\frac{7}{9}$
3. (a) $12\frac{1}{8}$ (13 shelves) (b) $13\frac{4}{7}$ (13 pieces)

Unit 17

Think about it!

1. (a) 4042 (b) 29 remainder 3
   (c) 137

Practise it!

1. 1593 tiles
2. 544 students
3. 25 boats

Unit 18

Think about it!

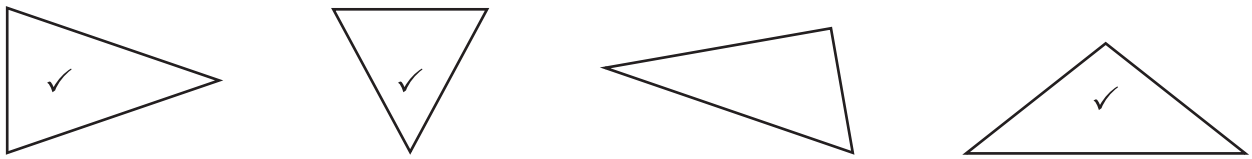
1. (a) $8 \times 55 = 440$ (b) $672 - 484 = 188$
   (c) $591 + 349 = 940$ (d) $1813 \div 49 = 37$
2. (a) $3 + (4 \times 9) = 39$ (b) $(3 + 4) \times 9 = 63$
   (c) $(12 + 6) \div 3 = 6$ (d) $12 + (6 \div 3) = 14$

Practise it!

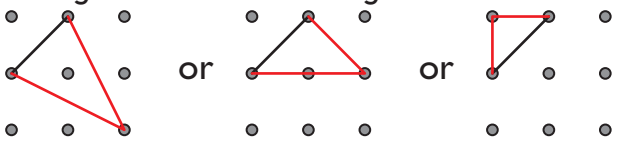
1. (a) true (b) true (c) false
   (d) false (e) true
2. $50 - (13 \times 2) = 24$
3. (a) $(183 + 375) \times 8 = 4464$
   (b) $42 \div (21 - 14) = 6$
4. (a) $8 \times (4 + 7) = 88$
   (b) $14 \times (3.4 + 6.6) = 140$

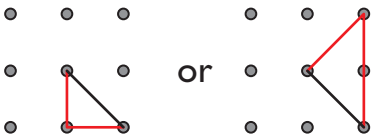
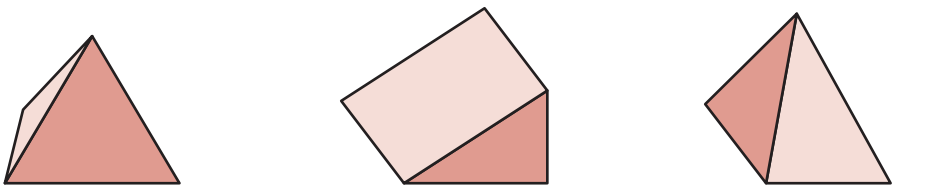
Unit 19
Think about it!

(a) (b) (c) (d)



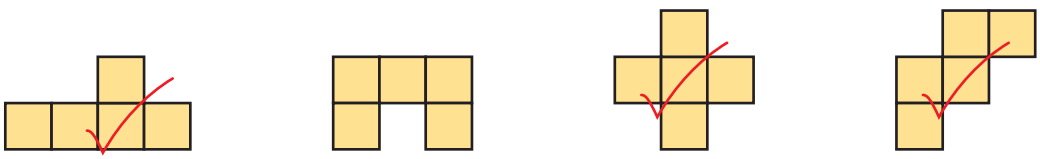
Practise it!

1. right-angled isosceles triangle
2. (a)  or or accept the second two diagrams in other orientations

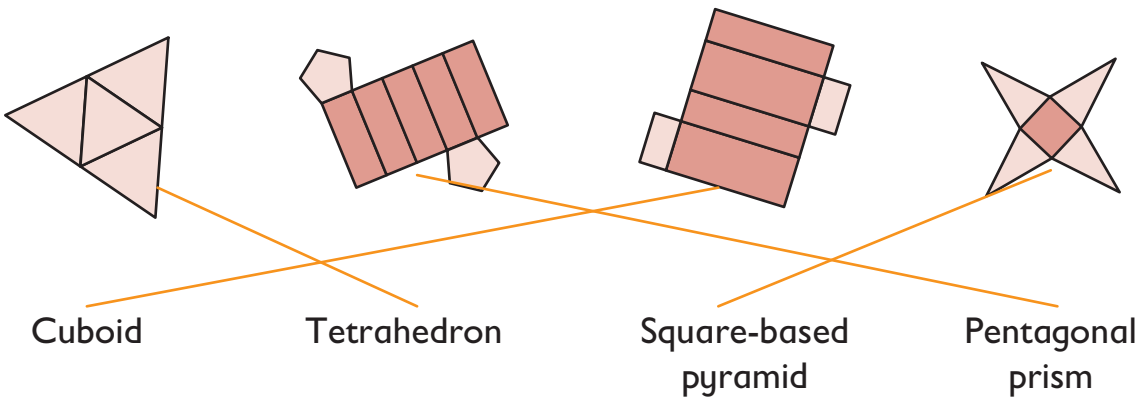
   (b)  or accept the diagrams in other orientations
3. 

   Equilateral triangle | Right-angled scalene triangle | Isosceles triangle

Unit 20
Think about it!

1. 

Practise it!

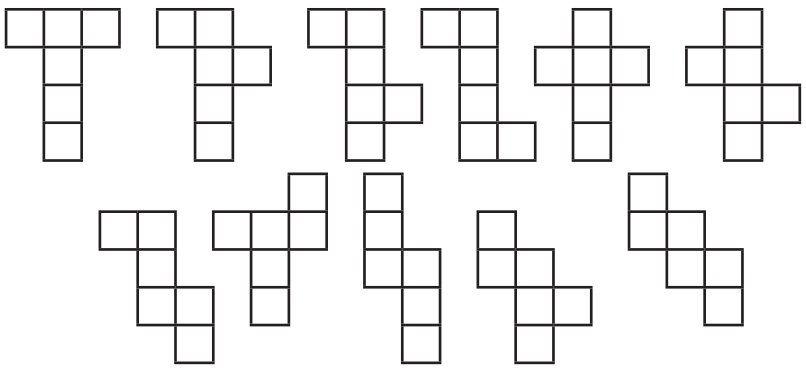
1. 

   Cuboid | Tetrahedron | Square-based pyramid | Pentagonal prism

2.

	has at least one square face	does not have a square face
has 6 or more faces	cube	hexagonal pyramid pentagonal prism
does not have 6 or more faces	square-based pyramid	tetrahedron cylinder

3. Accept any of these nets.



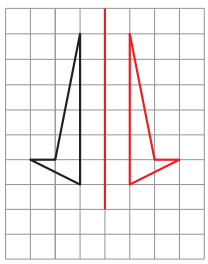
Unit 21

Think about it!

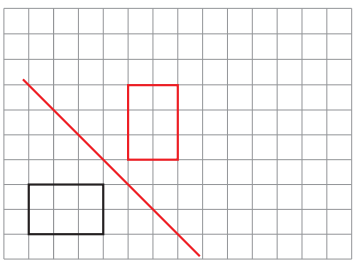
(a) order 4 (b) order 5 (c) order 3 (d) order 1

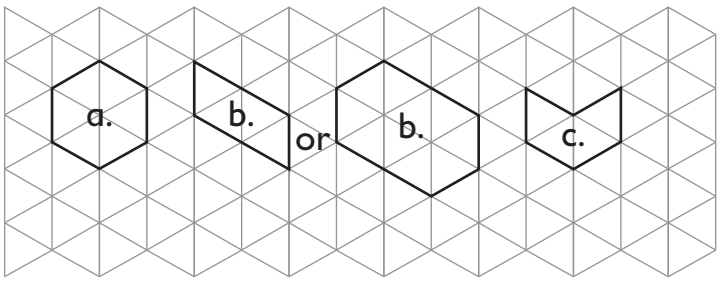
Practise it!

1. (a)

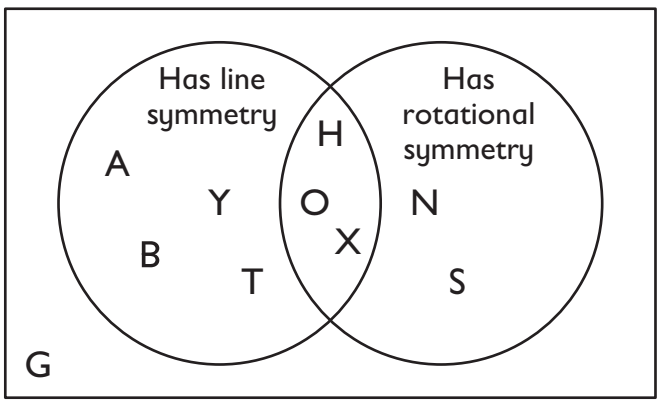


(b)



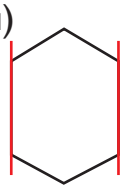
2. 

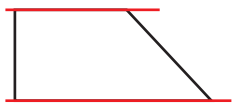
Accept other correct answers for each part.

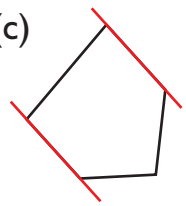
3. 

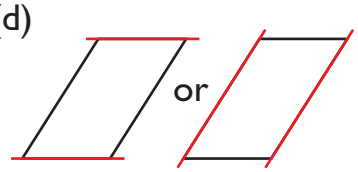
Unit 22

Think about it!

(a) 

(b) 

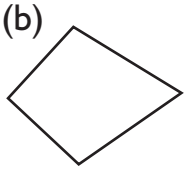
(c) 

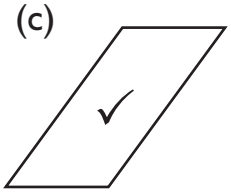
(d) 

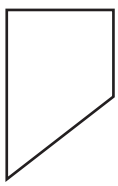
(accept other pairs of parallel sides)

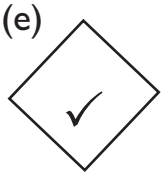
Practise it!

1. (a) 

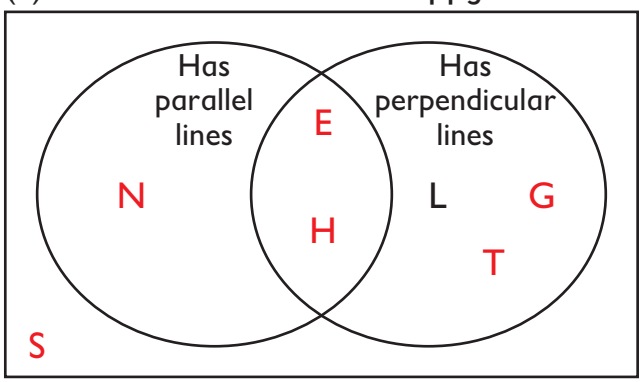
(b) 

(c) 

(d) 

(e) 

2. (a) Lupin Lane (b) Daisy Drive
(c) Sunflower Street and Poppy Avenue

3. 

Unit 23

Think about it!

(a) 80° (b) 135° (c) 15°

Practise it!

1. (a) 60° (b) 140° (c) 45°
2. No. 50° + 150° = 200° but a straight line only measures 180°.

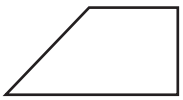
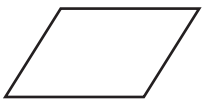
Unit 24

Think about it!

acute	obtuse	right
a, e	b, d	c

Practise it!

1. (a) acute (b) angle A = angle B
2. c, a, d, b
3.

2D shape	Acute angles	Right angles	Obtuse angles
	1	2	1
	2	0	2
	2	0	1

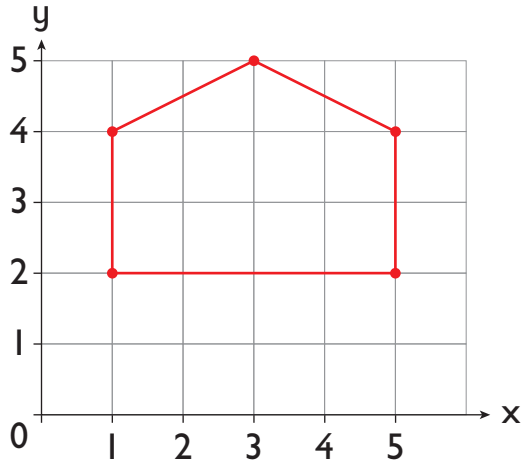
Unit 25

Think about it!

banana (1, 2) cherry (3, 0) orange (2, 4)

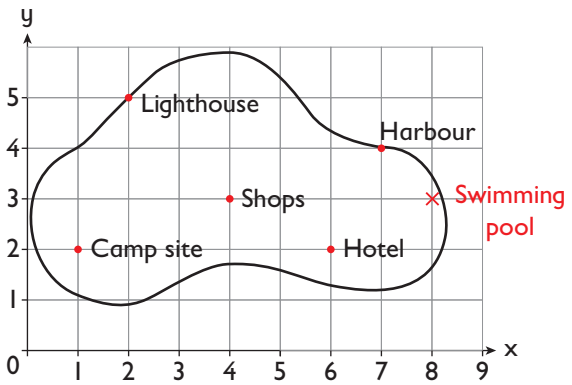
Practise it!

1.

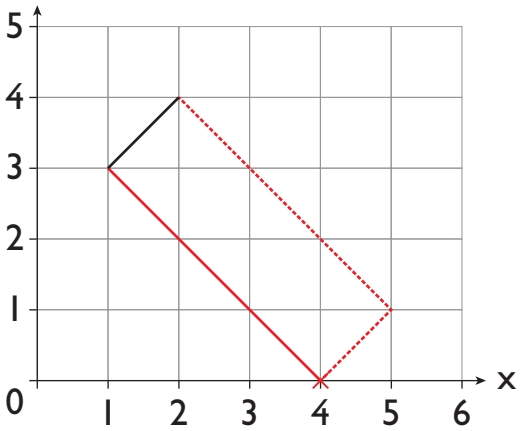


I have drawn a pentagon.

2. (a) the hotel (6 , 2)
   (b) the lighthouse (2 , 5)
   (c) the camp site (1 , 2)
   (d) the harbour (7 , 4)



3. (a)



(b) The fourth vertex is at (5, 1).

Unit 26

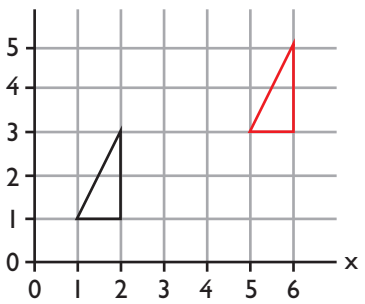
Think about it!

(a) 2 squares left and 2 up
(b) 2 squares right and 1 down
(c) 2 squares left (and 0 squares up or down)

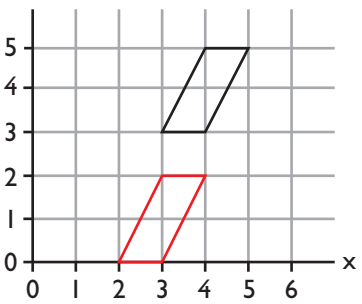
Practise it!

1 (a) 3 squares left and 1 square down
(b) 2 squares left and 3 squares up

2. (a)



(b)

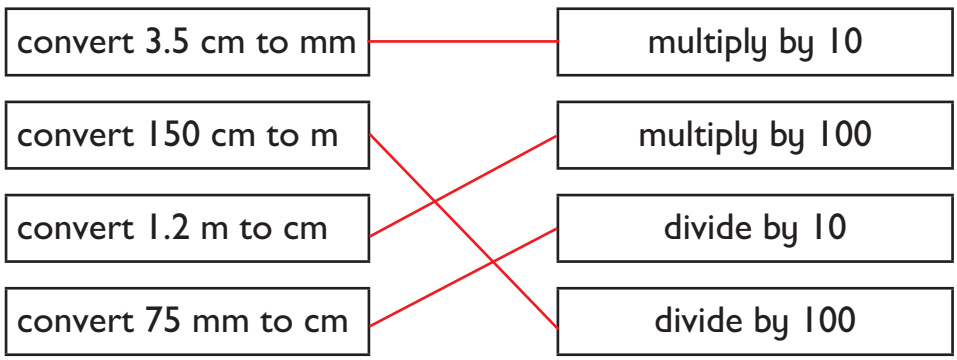


Unit 27

Think about it!

1. 3.4 cm = 34 mm
2. 1.5 m = 1500 mm
3. 10.2 m = 10 200 mm
4. 25.9 cm = 259 mm

Practise it!

1. (a) = 77 mm or 7.7 cm
   (b) = 10 mm or 1.0 cm
   (c) = 26 mm or 2.6 cm
   (d) = 18.5 mm or 1.85 cm
   (e) = 44 mm or 4.4 cm
   Accept answers that are 2 mm out either way.
2. | 1600 mm | 1.2 m | 150 mm | 12.5 cm |
   |---|---|---|---|
3. (a) 2.5 m = 250 cm
   (b) 5.1 m = 5100 mm
   (c) 11.9 m = 11 900 mm
   (d) 17.6 m = 1760 cm
4. 

Unit 28

Think about it!

1. 1.4 l = 1400 ml
2. 8.3 l = 8300 ml
3. 12.5 l = 12 500 ml
4. 0.7 l = 700 ml

Practise it!

1. (a) 6 kg (b) 15 kg (c) 0 kg (d) 23 kg
2. pumpkin = 2500 g
   tin of beans = 400 g
   fish = 15 900g
   cat = 5700 g
3. (a) 5.8 km or 5800 m
   (b) 22.3 kg or 22 300 g
   (c) 15.1 l or 15 100 ml

Unit 29

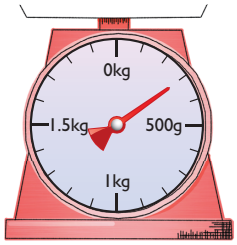
Think about it!

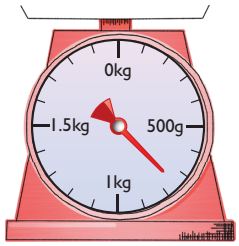
(a) 15°C (b) 300 ml (c) 1.6 kg (d) 3.4 cm

Practise it!

1. b, d, c, a
2. (a) 55 l (b) 22 l (c) 8 l (d) 43

Allow an error of 1 l either way on all answers but a.

3. (a) 

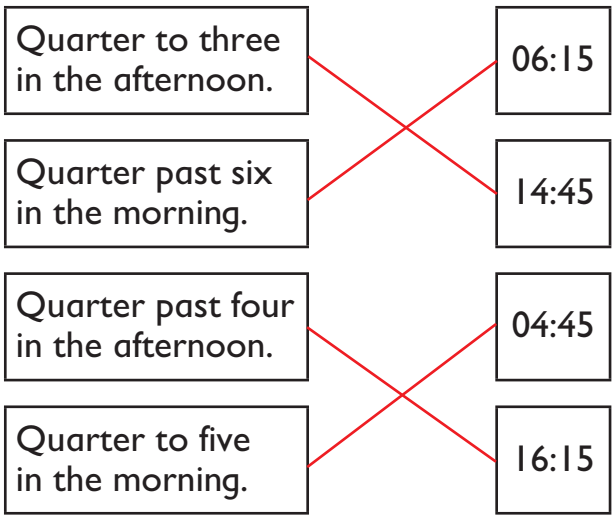
(b) 1.2 kg or 1200 g (c) 

Unit 30

Think about it!

(a) 5:30 p.m. (b) 7:15 a.m. (c) 10:48 p.m. (d) 10:05 a.m.

Practise it!

1. C A B D
2. 

3. (a) 2 hours and 25 minutes (b) 14:25

Unit 31

Think about it!

1. 16:49 or 4:49 p.m.
2. 16:21 or 16:02
3. 5 minutes

Practise it!

1. (a) Monday (b) 8th June (c) 55 days
2. (a) 19:29 or 7:29 p.m. (b) 50 minutes
   (c) No, the 14:52 takes longer (by 4 minutes)
3. (a) 92 days (b) 2029 (c) 7 months

Unit 32

Think about it!

Length = 9 cm
Width = 2 cm (accept these either way round)
Perimeter = 22 cm
Area = 18 cm^2

Practise it!

1. (a) area = 24 cm^2 (b) area = 55 cm^2 (c) area = 64 cm^2
2. (a) perimeter = 27 cm (b) perimeter = 16 cm (c) perimeter = 53 cm
3. (a) 3 cm (b) 6 cm (c) 4 cm

Unit 33

Think about it!

The answers will vary depending on the students' own data.

Practise it!

1.

Name	Distance from school	Time taken to get to school	Type of transport
Ioan	3 km	5 minutes	car
Vincent	5 km	20 minutes	bus
Konrad	1 km	15 minutes	bicycle
Olaf	across the road	2 minutes	walk

Students add individual answers.

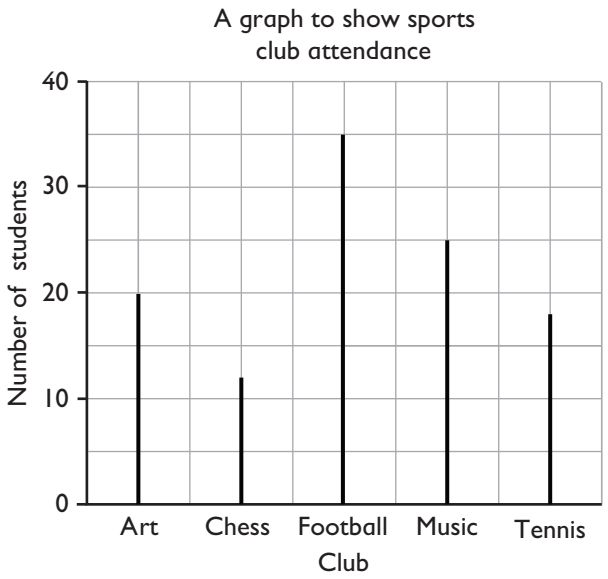
Unit 34

Think about it!

1. 15
2. pink
3. 76

Practise it!

1.



2. (a) 20 (b) 5 (c) 9 a.m.

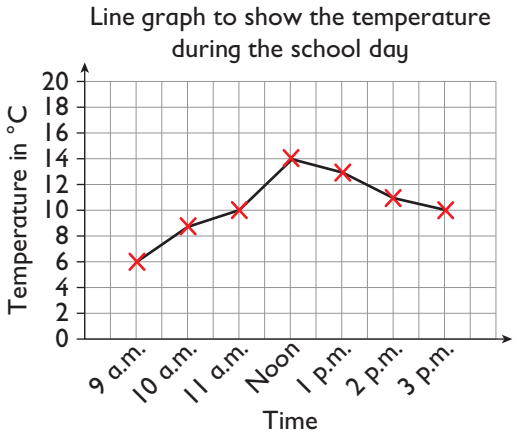
Unit 35

Think about it!

1. 20 pupils
2. noon (and at about 1:30 p.m.)

Practise it!

1.



2. (a) 800 m (b) 5 minutes (c) about 900–950 m
   (d) The graph shows that Zina does not get any nearer to school. She stays still. She could have stopped to wait for a friend or gone into a shop to buy a snack.

Unit 36

Think about it!

(a) ~~The day after Friday will be Monday.~~

(b) It will get dark tonight.

(c) ~~A birthday will be on 31st June.~~

(d) You will meet the Queen of England.

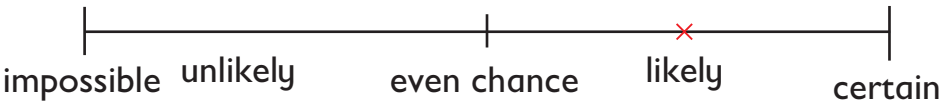
Practise it!

1.

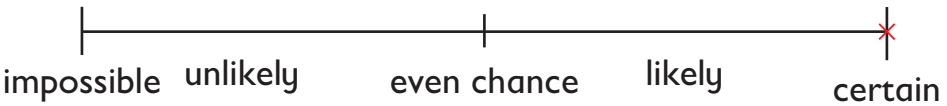
If you toss a fair coin it will land on heads.	even chance
even number + even number = odd number	impossible
Each day lasts 24 hours.	certain
You will go to school this month.	likely
	unlikely

2. (a) A new baby will be a boy.

(b) You will see a friend today.



(c) A pentagon has 5 sides.



(accept other answers for part b)

3. Accept any suitable answer such as:
(a) A new baby will be a girl,
or
If you toss a fair coin it will land on tails.

(b) A square has 4 equal sides,
or
Someone in the world will have a birthday on 1st January.

(c) You will go to the International Space Station one day.
or
Your teacher will have blue hair.