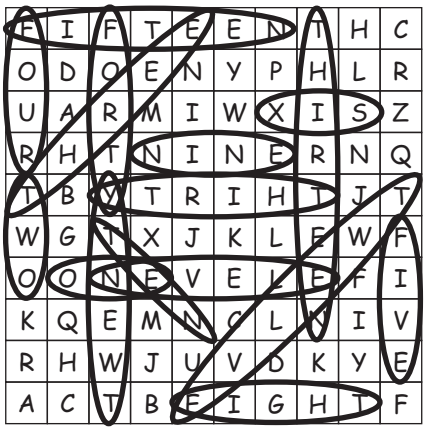
MATHOTIX 5 ANSWERS

Steve Pescott

Sheet 1

1. (a) 684 (b) 215 (c) 409 (d) 3748
(e) 5090 (f) 871 (g) 3264 (h) 8005
2. (a) 89 578 709 1218
(b) 123 132 213 231 312 321
3. (a) 2050 850 747 205 81
(b) 987 978 897 879 798 789
4. (a) 8731 (b) 1378
5. (a) 80 (b) 220
6. (a) 519 (b) 784 (c) 3295 (d) 27 801
7. (a) Six hundred and forty
(b) Five thousand nine hundred and fourteen
(c) Twelve thousand, seven hundred and fifty-three
(d) Fifty-seven thousand, nine hundred and eight
8.



9. (a) two (shoe) (b) six (ticks)
(c) four (door) (d) thirty (dirty)

Sheet 2

1.

River	Length
Nile	6693 km
Amazon	6436 km
Yangtze	6378 km
Huang He	5463 km
Ob-Irtysh	5410 km
Amur	4415 km
Lena	4399 km
Congo	4373 km
Mackenzie	4241 km
Mekong	4183 km

2. (a) 38 (b) 374 (c) 18 (d) 3550
(e) 301 (f) 2000
3. (a) 637 (b) 2406 (c) 6088
4. (a) 65 (b) 854 (c) 6 (d) 2943
(e) 409 (f) 2897
5. (a) 378 (b) 2206 (c) 999
6. (a) 98, 100, 102, 104
(b) 397, 399, 401
7. (a) 589, 859, 895, 985
8. (a) 597 and 607 (b) 609 and 709
9. (a) 89 (b) 7340 (c) 5659 (d) 43
(e) 88 (f) 5334
10. (a) 3419 km (b) 1831 km

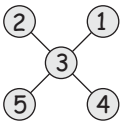
Sheet 3

1. (a) 7°C (b) ⁻3°C (c) ⁻12°C
2. (a) 13°C (b) ⁻3°C
3. (a) Onslo (b) 47 (c) 3
4. There is more than one answer to some of these.
(a) 50c + 50c + 40c
(b) 50c + 50c + 40c + 55c
(c) 50c + 50c + 40c + 40c + 40c
(d) 7 × 50c
(e) 55c + 9 × 40c

5.

$$\begin{array}{r} 55 \\ +\ 45 \\ \hline 100 \end{array}$$

6.



7. 36 + 9 = 45

Sheet 4

1.

×	5	3	10	8	4	7	2	6	9
4	20	12	40	32	16	28	8	24	36
8	40	24	80	64	32	56	16	48	72
9	45	27	90	72	36	63	18	54	81
10	50	30	100	80	40	70	20	60	90
2	10	6	20	16	8	14	4	12	18
7	35	21	70	56	28	49	14	42	63
3	15	9	30	24	12	21	6	18	27
5	25	15	50	40	20	35	10	30	45
6	30	18	60	48	24	42	12	36	54

×	2	5	6	10	7	8	3	9	4
3	6	15	18	30	21	24	9	27	12
6	12	30	36	60	42	48	18	54	24
8	16	40	48	80	56	64	24	72	32
2	4	10	12	20	14	16	6	18	8
10	20	50	60	100	70	80	30	90	40
7	14	35	42	70	49	56	21	63	28
4	8	20	24	40	28	32	12	36	16
9	18	45	54	90	63	72	27	81	36
5	10	25	30	50	35	40	15	45	20

2. (a) 648 (b) 3120
3. (a) 3868 (b) 578
4. (a) 50 (b) 15
(c)(i) 3, 3, 3, 3, 5
(ii) 3, 3, 3, 5, 5
(iii) 3, 5, 5, 10, 10
(iv) 5, 5, 5, 10, 10
(v) 3, 3, 10, 10, 10
5. (a)(i) 58 (ii) 100 (b) 62 (c) 11
6. (a) 96 (b) 19
7. (a) 6 × 2 + 6 ÷ 6 = 4
(b) 6 × 2 + 6 ÷ 2 = 9
8. 346 × 5 = 1730

Sheet 5

1. 6, 11, 4, 20, 2, 14, 2, 16, 24, 4, 0
2. (a) 40 + 3 + 30 + 9 = 82
3. (a) 7, 70, 700
3, 30, 300
(b) 6, 60, 600
20, 200, 2000
(c) 20, 200, 600
500, 5000, 50 000
(d) 600, 2500, 5400
2400, 4000, 18 000
4. (a) 20 (b) 40 (c) 60 (d) 120 (e) 10
(f) 280
5. (a) 300 (b) 400 (c) 700 (d) 100
(e) 600 (f) 1300
6. (a) 100 (b) 30 (c) 400 (d) 1800
7. Yes
8. (a) Guess (b) 10 (c) 6 (d) 60 (e) 62

Sheet 6

1. (a) $\frac{1}{2}$ (b) $\frac{5}{8}$ (c) $\frac{5}{9}$ (d) $\frac{1}{3}$ (e) $\frac{2}{5}$ (f) $\frac{4}{10}$

2. (a) $\frac{1}{4}$ (b) $\frac{2}{3}$ (c) $\frac{7}{8}$ (d) $\frac{3}{10}$ (e) $\frac{5}{7}$

3. (a) Seven-eighths
(b) Nine-tenths
(c) Three-quarters
(d) Two-thirds
4. (a) $\frac{3}{10}$ (b) $\frac{5}{6}$

6. (a) $\frac{1}{6}$ (b) $\frac{1}{4}$ (c) $\frac{5}{14}$

7. $\frac{2}{5}$

8. $\frac{3}{11}$

9. $\frac{2}{7}$

10. (b) $\frac{5}{12}$

11. (a) $\frac{1}{6}$ (b) $2

12. (a) $2 (b) $4 (c) $6 (d) $8
13. (a) The snake had lethal fangs.
(b) The man in the shop wore a blue tie.
(c) Ken lived at 56 Wongarthi Rd.
(d) Jayden played in a tennis event held every Saturday morning.
(e) The Vet had to weigh the cat before giving it a tablet.
(f) Kellie had to clean up the fluff if the cat came into her room.

Sheet 7

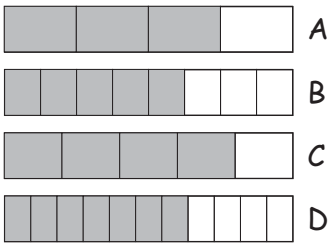
1. (a) 3 (b) 6 (c) 9 (d) 12 (e) 15
2. (a) 8 (b) 4 (c) 6 (d) 6 (e) 7 (f) 7
(g) 22 (h) 18 (i) 15 (j) 20
3. (a) 12 (b) 15 (c) 12 (d) 10 (e) 9
(f) 20 (g) 80 (h) 60
4. (a) $\frac{1}{4}$ (b) 5
5. 6
6. (a) 120 (b) 24
7. (a) $1 (b) $5

8. (a) $1.60 (b) $4.00
9. (a) $\frac{2}{5}$
(b) Yellow - 4 litres, Red - 8 litres, White - 8 litres
10. 60
11. 9

Sheet 8

1. (c) $\frac{2}{5}$

2.



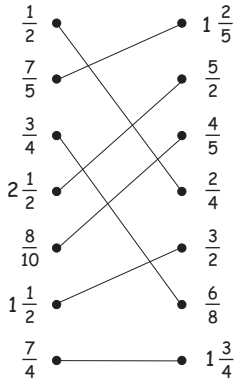
(e) $\frac{5}{8}$ $\frac{7}{11}$ $\frac{3}{4}$ $\frac{4}{5}$

3. (d) They are all the same.
(e) $\frac{2}{6}$ $\frac{3}{9}$ etc

4. $\frac{2}{4}$ $\frac{3}{6}$ etc

5. Two
6. $\frac{1}{4}$ $\frac{1}{2}$ $\frac{2}{3}$ $1\frac{1}{3}$ $1\frac{3}{5}$

7.



8. (a) $\frac{1}{2}$, 1, $1\frac{1}{2}$, **2**, $\mathbf{2\frac{1}{2}}$,**3**

(b) $\frac{2}{5}$, $\frac{4}{5}$, $1\frac{1}{5}$, $\mathbf{1\frac{3}{5}}$, **2**, $\mathbf{2\frac{2}{5}}$

(c) $\frac{2}{3}$, $1\frac{1}{3}$, 2, $\mathbf{2\frac{2}{3}}$, $\mathbf{3\frac{1}{3}}$, **4**

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

10. $6\frac{2}{5}$
11. 20
12. 5

Sheet 9

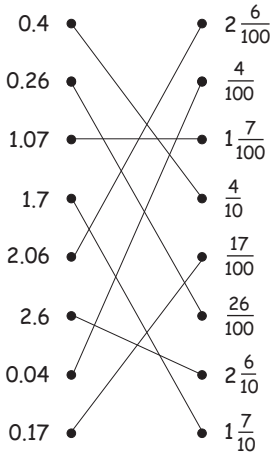
1.

Number	100	10	1	$\frac{1}{10}$	$\frac{1}{100}$
3.5			3	5	
18.6		1	8	6	
9.47			9	4	7
10.05		1	0	0	5
375.6	3	7	5	6	
201.84	2	0	1	8	4

2. (a) 8 units, 6 tenths
(b) 6 tens, 5 units, 1 tenth, 9 hundredths
(c) 7 hundreds, 3 tens, 6 units, 4 tenths
3. (a) 49.6 (b) 8.15 (c) 607.3 (d) 18.29
4. (a) 23.46 (b) 362.5 (c) 714.5
(d) 60.28 (e) 83.14 (f) 50.5
5. (a) 5.7 (b) 3.29 (c) 8.04 (d) 5.76
6. (a) 3.5, 6.8, 9.3, 12.6, 21.8
(b) 0.71, 4.35, 8.9, 63.2, 124.6
7. T. Rout, S. Hark, B. Ream, W. Hale

Sheet 10

1. (a) 4.5 (b) 0.6 (c) 1.2
2. (a) 2.5 (b) 0.5 (c) 0.25
3. (a) 3.7 (b) 8.44 (c) 19.3 (d) 7.15
4. (a) 8.63 (b) 12.44 (c) 9.71 (d) 2.70
5. (a) 0.4, 0.5, 0.6, 0.7, **0.8**, **0.9**, **1.0**
(b) 0.5, 1.0, 1.5, 2.0, **2.5**, **3.0**, **3.5**
(c) 0.2, 0.4, 0.6, 0.8, **1.0**, **1.2**, **1.4**
(d) 1.6, 2.0, 2.4, 2.8, **3.2**, **3.6**, **4.0**
6. (a) 0.5 (b) 0.3 (c) 3.5 (d) 4.7 (e) 0.27
(f) 8.39
7.



8. (a) 4 (b) 5
9. (a) 2.7 (b) 7.1
10. (a) TENTS (b) TEETH
11. 1970

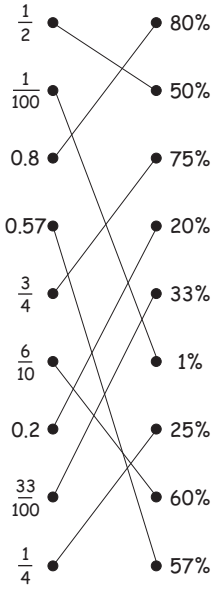
Sheet 11

1. (a) 85.9 (b) 78.4 (c) 14.08 (d) 10.00
(e) 44.4 (f) 34.5 (g) 4.58 (h) 2.09
2. (a) 55.5 (b) 64.9 (c) 362.10
(d) 3.3 (e) 28.7 (f) 200.56
3. 6.5 kg
4. 6.5 kg
5. (a) $4.30 (b) $5.70
7. 2.5 m, 3.5 m
8. (a) 110.091 (b) 1502.89 (c) $898.75

Sheet 12

1. (a) 18% (b) 73% (c) $\frac{78}{100}$ (d) $\frac{9}{100}$
2. (a) $\frac{34}{100}$ (b) 34% (c) 66%
4. (a) 50% (b) 20% (c) 80%
5. (a) 50% (b) 80% (c) 20%
6. 60%
7. 35%
8. (a) 41% (d) Melbourne (e) Sydney
(f) Just over 20 million

9.



10.

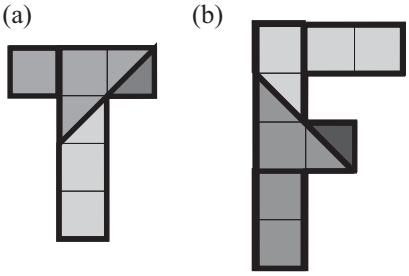
50%	50%	50%	50%
20%	50%	20%	50%

Sheet 13

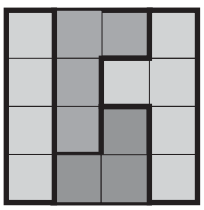
1. (a) Vertical (b) Horizontal
(c) Vertical (d) Horizontal
3. Yes
4. Yes
5. Yes
7. (a) 2:00 (b) less than 90°
8. (a) B (b) A (c) B (d) A (e) A (f) B
9. (a) 3:00, 9:00 (there are others)
(b) 90°
10. Perpendicular Parallel

Sheet 14

1. trapezium, triangle, octagon, circle, square, parallelogram, rectangle, pentagon, hexagon
2. (a) (b)



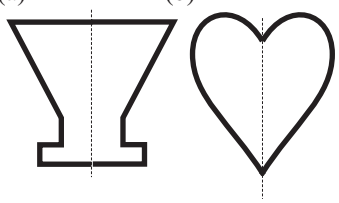
3.



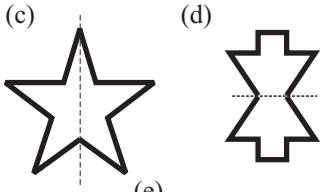
4. 18 (1x1-**6**, 1x2- **4**, 1x3-**2**, 2x1-**3**, 2x2-**2**, 2x3-**1**)
5. 8
6. octagons, squares
trapeziums, squares

Sheet 15

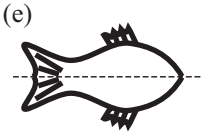
1. (a) (b)



(c) (d)

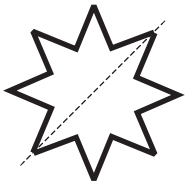


(e)

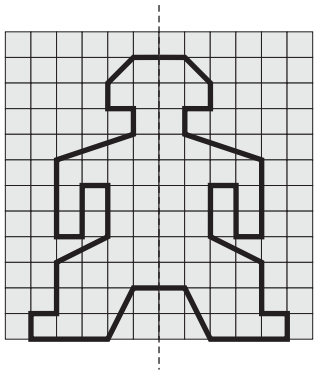


(f)

(g)

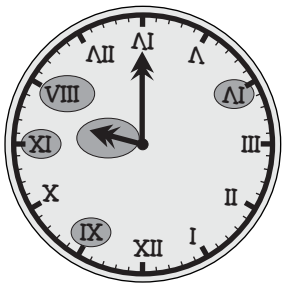


2.



3. 3:50

4.



Sheet 16

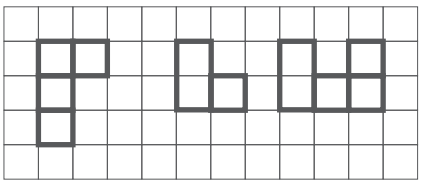
1. cube, sphere, cone, square-based pyramid, cylinder, triangular prism, rectangular prism

3.

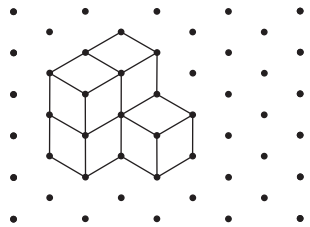
Object	Number of faces	Number of vertices	Number of edges
Square-based Pyramid	5	5	8
Triangular Prism	5	6	9

4. 5, 6, 14, 18

6.

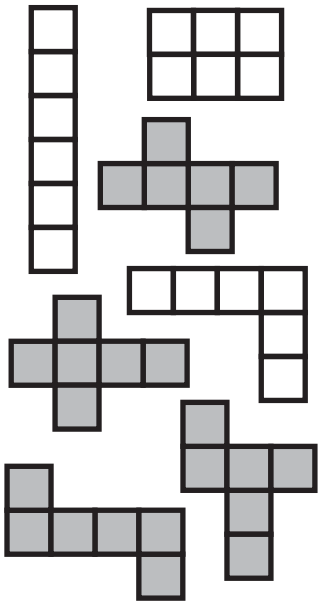


7.

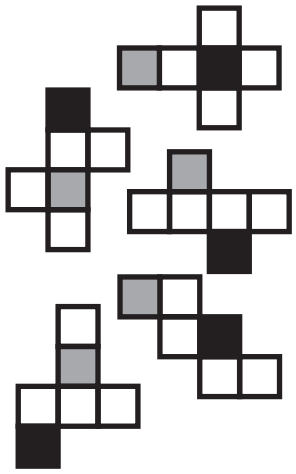


Sheet 17

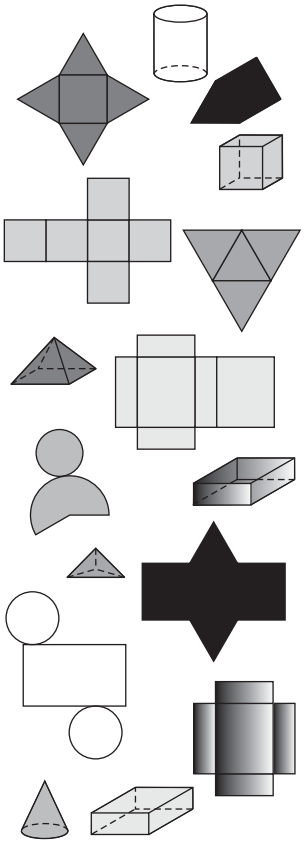
1.



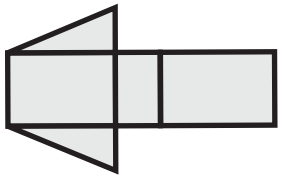
2.



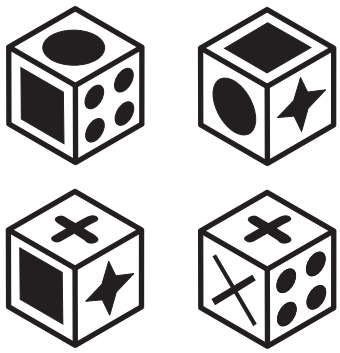
3.



4.



5.

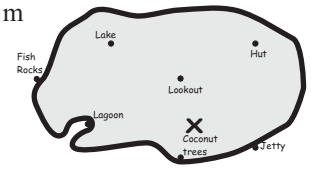


Sheet 18

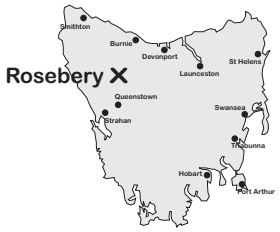
1. East **2.** North **3.** East
4. South **5.** West **6.** East
7. South **8.** East **9.** West
10. East **11.** North **12.** West
13. South
14. (a) Bucharest (b) Reykjavik (c) Berlin (d) Stockholm
15. (a) E2 (b) I2 (c) F5 (d) I4 (e) F5 (f) K1
16. (a) England (b) France (c) Greece (d) Austria

Sheet 19

1. North **2.** West **3.** East
4. South
5. (a) 700 m (b) 500 m (c) 800 m
(d) 400 m
6. 2200 m
7. 500 m

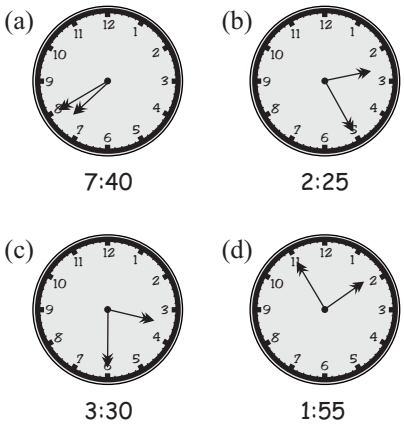


8. (a) Triabunna (b) St Helens
(c) Launceston (d) Smithton
9. (a) H11 (b) M3
10. (a) 25 km (b) 50 km (c) 100 km
(d) 250 km
11.



Sheet 20

1. (a) Four o'clock
(b) Half past eight
(c) Twenty past six
(d) Ten to eight
(e) Quarter to ten
(f) Quarter past one
2. (a) 5:30 (b) 10:10 (c) 3:45 (d) 6:05
3.



4. (a) 1 year = 12 months
(b) 1 week = 7 days
(c) 1 day = 24 hours
(d) 1 hour = 60 minutes
(e) 1 minute = 60 seconds
(f) April = 30 days
(g) December = 31 days
5. (a) 26th of January
(b) 25th of December
(c) 1st of April
6. (a) 30 (b) After (c) 5th of July
7. 2000
8. 6:20
9. (a)(i) 8:30 (ii) 8:43 (iii) 9:07
(b) 9:27
(c)(i) 7 (ii) 6 (iii) 21 (iv) 57

Sheet 21

1. (a) 3, 9, 17 (b) 6, 14, 28
(c) 5, 25 (d) 10, 25, 55
(e) 20, 140, 260 (f) 50, 130, 270
2. (a) 5 cm (b) 3 cm (c) 2 cm
(d) 6 cm (e) 4 cm
3. (a) 8 mm (b) 25 mm (c) 34 mm
(d) 42 mm (e) 62 mm
4.

Spider	Length (mm)
A	32 mm
B	38 mm
C	35 mm
D	41 mm
E	30 mm
F	44 mm

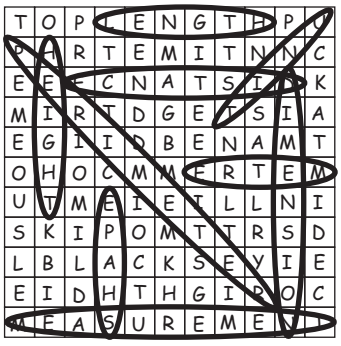
5. (a) millimetre (b) centimetre

Sheet 22

1. (a) B (b) C (c) D (d) A (e) C
(f) A or B (g) D (h) A
2. (a) metres (b) centimetres
(c) millimetres (d) kilometres
(e) centimetres (f) millimetres
(g) metres (h) kilometres
3. (a) 9 km (b) 70 m (c) 3 mm
(d) 250 km (e) 25 m (f) 70 cm
(g) 170 mm (h) 380 000 km
4. (a) 12 m
5. Tennis court
6. Computer keyboard

Sheet 23

1. metre, centimetre, millimetre, kilometre
2. (a) 1m = 100 cm
(b) 1 cm = 10 mm
(c) 1 m = 1000 mm
(d) 1 km = 1000 m
(e) 2 m = 200 cm
(f) 3 cm = 30 mm
(g) 6 km = 6000 m
(h) $\frac{1}{2}$ km = 500 m
(i) $\frac{1}{2}$ cm = 5 mm
(j) 40 mm = 4 cm
3. 50 cm
4. 6 cm
5. (a) 24 cm (b) 16 m (c) 24 cm
6. (a) 20 cm (b) 22 cm (c) 34 cm
7.



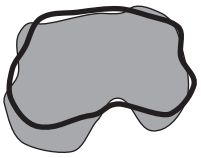
Sheet 24

1. (a)

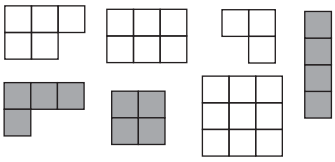
(b)

(c)

(d)



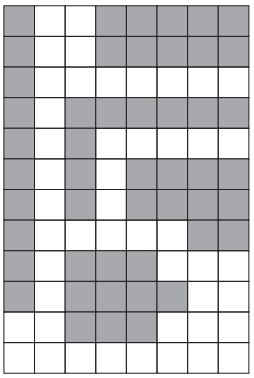
2.



3.

D	C	E	F	B	A

4. (a) 12 cm^2 (b) 8 cm^2 (c) 14 cm^2
5. There are many different shapes that would have an area of 10 cm^2.
Examples:



6. Approximately 15 cm^2

Sheet 25

1. (a) 10 cm2 (b) 18 cm2
2. (a) 8 cm2 (b) 15 cm2
3. (a) 6 cm2 (b) 24 cm2
4.

Length (cm)	Width (cm)	Area (cm^2)
10	2	20
8	5	40
7	6	42
11	8	88
20	10	200

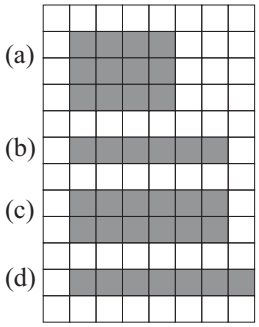
5. Perimeter = 22 cm, Area = 30 cm^2

6.

Length (cm)	Width (cm)	Perimeter (cm)	Area (cm^2)
3	2	10	6
6	5	22	30
10	4	28	40
8	8	32	64
20	5	50	100

7. Length = 10 cm, width = 2 cm

8.



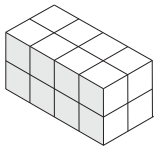
Sheet 26

1. (a) 3 (b) 8 (c) 8 (d) 12 (e) 18 (f) 24

2. (a)

length	width	height
4 cm	3 cm	2 cm

(b)



(c) 16

3. (a) 2000 (b) 5000 (c) 500 (d) 3
(e) 4000 (f) 6000 (g) 8500

4. (a) L (b) L (c) mL (d) mL (e) L
(f) L (g) L (h) mL

5. 5

6. 500 mL

7. (a) 800 mL (b) 2L

Sheet 27

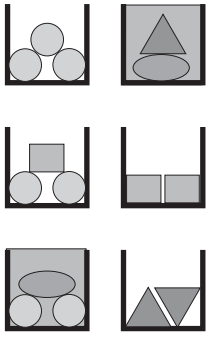
1. (a) 8 kilograms (b) 8 tonnes
(c) 8 grams (d) 45 kilograms

2.

Object	Mass
Largest dog	150 kg
Ten litres of water	10 kg
Adult African elephant	5 tonnes
Adult Indian elephant	3 tonnes
Tennis ball	50 g
Car	1000 kg
Adult human brain	10 kg
Cricket ball	1 kg

3. (a) 3000 (b) 7000 (c) 500 (d) 2 (e) 8

4.



5. watermelon, pumpkin, coconut, rock melon, squash, zucchini, cauliflower, etc

6. (a) Charlie - $2.40
Chester - $2.30
Chuck - $2.10
(b) Chuck

Sheet 28

1. (a) A (b) A (c) A

2. (c) a 50-50 chance (d) impossible

3. strawberry, toffee, caramel, peppermint, turkish delight

4. ball, book, music CD, computer game

5. green, blue, red

6. (a) 3 red, 2 yellow, 1 blue
(b) 3 red, 2 green, 2 yellow, 1 blue

Sheet 29

1. (a)

Pet	Number
Cat	8
Mouse	4
Snake	1
Goldfish	2
Dog	14
Horse	5
Hermit Crab	3

(b) 37

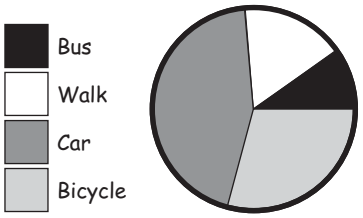
2. (a)

Age Group	Number
0 - 10	9
11 - 20	26
21 - 30	21
31 - 40	14

(b) 35 (c) 70

3. zoo - 10, museum - 10, aquarium - 20

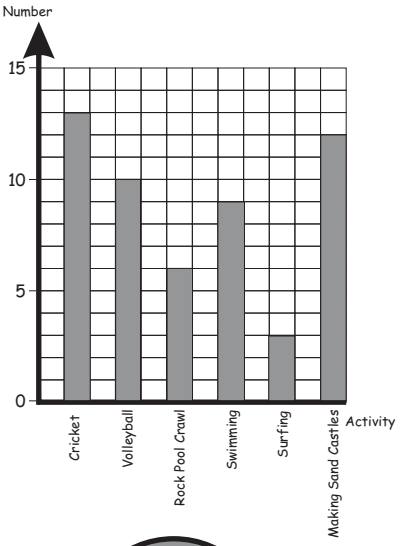
4.



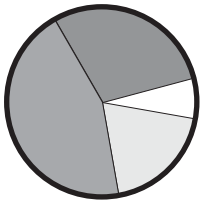
5. (a)(i) 6°C (ii) 10°C (iii) 13°C
(b) 4:00 pm (c)(i) 4°C (ii) 6:00 am

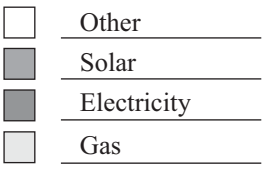
Sheet 30

1.



2.





3.

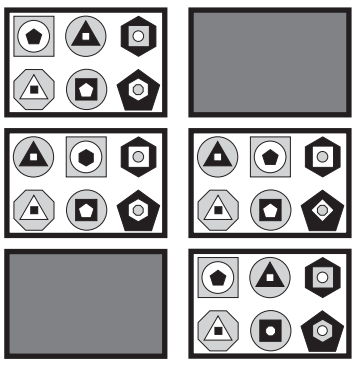
Lizard	Tally	Number
Skink	𝍸 𝍸 𝍸 II	17
Blue-tongue	𝍸 𝍸 I	11
Shingle Back	𝍸 IIII	9
Bearded Dragon	𝍸 II	7
Gecko	IIII	4
Monitor	𝍸 I	6
	Total	54

4.

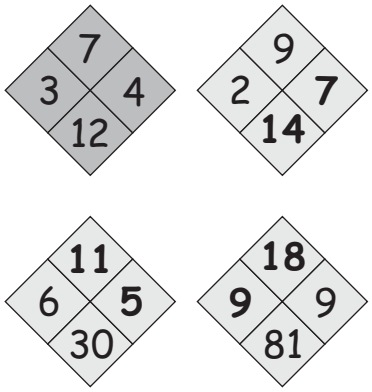
Height (cm)	Tally	Number
120 -	IIII	4
130 -	𝍸 𝍸 IIII	14
140 -	𝍸 𝍸 𝍸 𝍸	20
150 -	𝍸 𝍸 II	12
	Total	50

Sheet 31

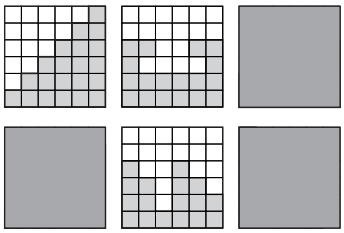
1.



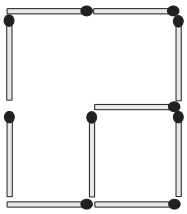
2.



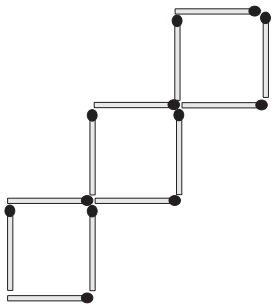
3. A = 11 cm, B = 12 cm, C = 13 cm
4. North
5. 50 seconds
6. 6 goldfish, 4 guppies
7.



8. (a)

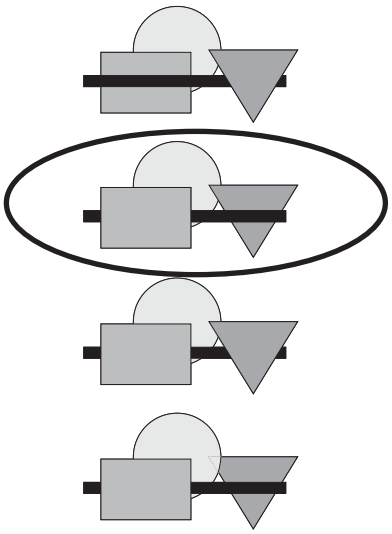


(b)



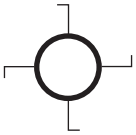
Sheet 32

1.



2. 8:12
3. A
4. (a) 6∂ (b) E (**O**ne, **T**wo, **T**hree, **F**our, ..)

(c)



5. Styron = 10, Seth = 6, Mother = 30
6. Canary - Bryan
Cat - Barbara
Dog - Andrew
Cockatoo - Amy
7. Coconut - 2 kg, pineapple - 3 kg
8. These are examples.
4 + 4 + 4 - 4 = 8
(4 + 4 + 4) ÷ 4 = 3
4 + 4 + (4 ÷ 4) = 9
(4 × 4) + (4 ÷ 4) = 17