

S1 Final Assessment Revision Booklet MP3



Contents

Whole Numbers

Decimals

Integers

Algebra

Fractions/Percentages

Angles

Coordinates

Area

Stats

Whole Numbers

Exercise 3

Show all your working for this exercise.



1. Copy the following and find the answers :-

$$\begin{array}{r} (a) \quad 468 \\ + 222 \\ \hline \end{array}$$

$$\begin{array}{r} (b) \quad 678 \\ + 396 \\ \hline \end{array}$$

$$\begin{array}{r} (c) \quad 499 \\ - 368 \\ \hline \end{array}$$

$$\begin{array}{r} (d) \quad 777 \\ + 333 \\ \hline \end{array}$$

$$\begin{array}{r} (e) \quad 904 \\ - 717 \\ \hline \end{array}$$

$$\begin{array}{r} (f) \quad 8008 \\ + 1764 \\ \hline \end{array}$$

$$\begin{array}{r} (g) \quad 2345 \\ + 7656 \\ \hline \end{array}$$

$$\begin{array}{r} (h) \quad 5004 \\ - 4295 \\ \hline \end{array}$$

Whole Numbers

- (i) $4870 + 888$ (j) $5432 + 3577$ (k) $7941 - 5974$ (l) $9009 - 178$

2. (a) Last season, the Tigers scored 4375 points and the Panthers scored 2680 points.

- (i) How many points were scored altogether?
(ii) How many more points were scored by the Tigers than the Panthers?



(b)



A secretary earned £7660 last year.
This year she received a pay increase of £1360.
What is her salary this year?

- (c) Jay has £2450. He gives Paul £360, Beth £660 and Andy £150.
Peter gives Jay £75.

How much money does Jay have now?



Exercise 4

1. Write down the answers to the following :-

- (a) 45×10 (b) 22×10 (c) 10×76 (d) 10×20
(e) 123×10 (f) 802×10 (g) 10×1200 (h) 10×1030

2. Write down the answers to the following :-

- (a) 41×100 (b) 99×100 (c) 100×231 (d) 100×100
(e) 501×100 (f) 100×300 (g) 100×2020 (h) 5000×100

3. Write down the answers to these :-

- (a) 230×10 (b) 330×100 (c) 404×10 (d) 100×660
(e) 10×900 (f) 1000×100 (g) 1010×10 (h) 2000×100

4. A bottle holds 100 millilitres of medicine.

How many millilitres are there in :-

- (a) 4 bottles (b) 30 bottles?



5. There are 10 millimetres in 1 centimetre.

How many millimetres are there in :-

- (a) 5 cm (b) 40 cm (c) 101 cm (d) 1000 cm?

Whole Numbers

1. Write down the answers to the following :-

- (a) $330 \div 10$ (b) $560 \div 10$ (c) $700 \div 10$ (d) $3000 \div 10$
(e) $8000 \div 10$ (f) $5500 \div 10$ (g) $10\,000 \div 10$ (h) $140\,500 \div 10$



2. Write down the answers to the following :-

- (a) $200 \div 100$ (b) $1600 \div 100$ (c) $8000 \div 100$ (d) $24\,000 \div 100$
(e) $10\,000 \div 100$ (f) $20\,100 \div 100$ (g) $300\,000 \div 100$ (h) $5\,000\,000 \div 100$

3. Write down the answers to these :-

- (a) $9000 \div 100$ (b) $2050 \div 10$ (c) $22\,000 \div 100$ (d) $1100 \div 10$
(e) $8700 \div 100$ (f) $10\,000 \div 10$ (g) $1000 \div 100$ (h) $100 \div 100$

4. There are 10 millimetres in 1 centimetre and 100 centimetres in 1 metre.

How many metres are equivalent to :-

- (a) 500 cm (b) 80 000 cm (c) 50 000 mm (d) 100 000 mm ?

5. A bottle can hold 100 headache pills.

How many similar bottles are needed to hold :-

- (a) 700 pills (b) 40 000 pills ?



Exercise 6

1. Copy the following and complete the calculations :-

- (a)
$$\begin{array}{r} 27 \\ \times 3 \\ \hline \end{array}$$
 (b)
$$\begin{array}{r} 34 \\ \times 4 \\ \hline \end{array}$$
 (c)
$$\begin{array}{r} 71 \\ \times 6 \\ \hline \end{array}$$
 (d)
$$\begin{array}{r} 55 \\ \times 5 \\ \hline \end{array}$$

(e)
$$\begin{array}{r} 132 \\ \times 7 \\ \hline \end{array}$$
 (f)
$$\begin{array}{r} 308 \\ \times 6 \\ \hline \end{array}$$
 (g)
$$\begin{array}{r} 367 \\ \times 4 \\ \hline \end{array}$$
 (h)
$$\begin{array}{r} 238 \\ \times 9 \\ \hline \end{array}$$



2. Rewrite each of these in the above form and complete the calculations :-

- (a) 35×6 (b) 93×5 (c) 8×43 (d) 78×7
(e) 9×406 (f) 8×333 (g) 9231×9 (h) 4×4444

3. Show all working :- (a) How many minutes are there in eight hours ?

(b) How many hours are in a week ?

(c) Find :- (i) $3 \times 72 \times 4$ (ii) $5 \times 621 \times 7$

Whole Numbers


Exercise 8



- Try to do the following mentally :- (use the 2-step approach)
 - 32×20
 - 52×30
 - 30×40
 - 123×30
 - 40×25
 - 50×304
 - 70×80
 - 90×321
- Calculate each of the following (not necessarily mentally) :-
 - 234×30 [Find 10×234 first = 2340 and then find 2340×3]
 - 137×50
 - 705×60
 - 453×40
 - 876×20
- Calculate each of the following :-
 - 167×200 [Find 167×100 first = 16 700 and then find $16 700 \times 2$]
 - 152×400
 - 405×500
 - 517×600
 - 420×500
 - 879×300
 - 987×200
 - 222×800
 - 510×700

Exercise 9



- Round to the nearest 10 :-
 - 58
 - 43
 - 85
 - 128
 - 362
 - 489
 - 3765
 - 1996
- Round to the nearest 100 :-
 - 471
 - 849
 - 1396
 - 3445
 - 9819
 - 6066
 - 11 870
 - 9951
- A room has a perimeter of 7465 centimetres.
Round this figure to the nearest :-
 - 10
 - 100
-  Sanjit has £1996 in his bank.
Round this figure to the nearest :-
 - £10
 - £100.
- A spaceship orbits a planet and travels 99 909 kilometres.
Round this figure to the nearest :-
 - 10 km
 - 100 km.



Answers

Chapter 1 Exercise 3

- | | | | |
|--------------|-----------|----------|---------|
| 1.a 690 | b 1074 | c 131 | d 1110 |
| e 187 | f 9772 | g 10 001 | h 709 |
| i 5758 | j 9009 | k 1967 | l 8831 |
| 2.a (i) 7055 | (ii) 1695 | b £9020 | c £1355 |

Chapter 1 Exercise 4

- | | | | |
|------------|-----------|-----------|-------------|
| 1.a 450 | b 220 | c 760 | d 200 |
| e 1230 | f 8020 | g 12 000 | h 10 300 |
| 2.a 4100 | b 9900 | c 23 100 | d 10 000 |
| e 50 100 | f 30 000 | g 202 000 | h 500 000 |
| 3.a 2300 | b 33 000 | c 4040 | d 66 000 |
| e 9000 | f 100 000 | g 10 100 | h 200 000 |
| 4.a 400 ml | b 3000 ml | | |
| 5.a 50 mm | b 400 mm | c 1010 mm | d 10 000 mm |

Chapter 1 Exercise 5

- | | | | |
|---------|---------|--------|----------|
| 1.a 33 | b 56 | c 70 | d 300 |
| e 800 | f 550 | g 1000 | h 14 050 |
| 2.a 2 | b 16 | c 80 | d 240 |
| e 100 | f 201 | g 3000 | h 50 000 |
| 3.a 90 | b 205 | c 220 | d 110 |
| e 87 | f 1000 | g 10 | h 1 |
| 4.a 5 m | b 800 m | c 50 m | d 100 m |
| 5.a 7 | b 400 | | |

Chapter 1 Exercise 6

- | | | | |
|----------|--------|-----------|-------------|
| 1.a 81 | b 136 | c 426 | d 275 |
| e 924 | f 1848 | g 1468 | h 2142 |
| 2.a 210 | b 465 | c 344 | d 546 |
| e 3654 | f 2664 | g 83 079 | h 17 776 |
| 3.a 480 | b 168 | c (i) 864 | (ii) 21 735 |
| 4.a 1224 | b 92 | | |

Chapter 1 Exercise 7

- | | | | |
|--------|-------|-----------|----------|
| 1.a 9 | b 147 | c 55 | d 619 |
| 2.a 16 | b 189 | c 206 | d 52 |
| e 444 | f 575 | g 2051 | h 842 |
| 3.a 31 | b 55 | c (i) 137 | (ii) 329 |
| 4.a 82 | b 368 | c 349 | d 1763 |

Decimals

Exercise 5

1. Write down the answers to the following :-

- (a) 8.4×10 (b) 9.8×10 (c) 7.62×10 (d) 18.71×10
(e) 6.41×100 (f) 0.91×100 (g) 4.021×100 (h) 0.0054×100
(i) 5.213×1000 (j) 0.8765×1000 (k) 1.0041×1000 (l) 4.2×1000

2. A crate weighs 47.62 kg. What would be the weight of :-

- (a) 10 crates (b) 100 crates (c) 1000 crates (d) 10 000 crates ?

3. There are 1000 millilitres in a litre. How many millilitres are there in :-

- (a) 5 litres (b) 7.62 litres (c) 0.0415 litres (d) 0.01 litres ?

Decimals

Exercise 6

1. Write down the answers to the following :-

- (a) $28.6 \div 10$ (b) $19.8 \div 10$ (c) $7.62 \div 10$ (d) $187.1 \div 10$
(e) $64.1 \div 100$ (f) $10.91 \div 100$ (g) $4.2 \div 100$ (h) $0.54 \div 100$
(i) $521.3 \div 1000$ (j) $0.8 \div 1000$ (k) $1.004 \div 1000$ (l) $9 \div 1000$

2. The length of 100 pieces of railway track is 412.6 metres long.

- (a) What is the length of each piece in metres ?
(b) Change your answer to centimetres.



3. There are 1000 squibiis in a martian pound.
How many martian pounds in :-

- (a) 3497 squibiis (b) 214.6 squibiis
(c) 21977 squibiis (d) 1 squibii ?



Exercise 7

1. Write down the answers to the following :-

- (a)
$$\begin{array}{r} 4.34 \\ \times 4 \\ \hline \end{array}$$
 (b)
$$\begin{array}{r} 8.27 \\ \times 7 \\ \hline \end{array}$$
 (c)
$$\begin{array}{r} 8.78 \\ \times 6 \\ \hline \end{array}$$
 (d)
$$\begin{array}{r} 119.38 \\ \times 9 \\ \hline \end{array}$$

(e) 5.7×8 (f) 42.3×4 (g) 135.9×5 (h) 7×37.521

2. Show all your working to the following questions :-

(a) Fred the monkey eats 3.74 kg of food every day.

What is the weight of food Fred will eat in :-

- (i) 3 days (ii) a week ?

(b) Boris the zookeeper gets paid £7.84 an hour.

How much will Boris earn in :-

- (i) 4 hours (ii) 9 hours ?

(c) Kevin the Camel eats six 3.71 kg boxes of dates every month.
Karen the Camel eats five 4.09 kg boxes.

Who eats the most and by how much ?



Decimals

Exercise 6

1. Write down the answers to the following :-

- (a) $28.6 \div 10$ (b) $19.8 \div 10$ (c) $7.62 \div 10$ (d) $187.1 \div 10$
(e) $64.1 \div 100$ (f) $10.91 \div 100$ (g) $4.2 \div 100$ (h) $0.54 \div 100$
(i) $521.3 \div 1000$ (j) $0.8 \div 1000$ (k) $1.004 \div 1000$ (l) $9 \div 1000$

2. The length of 100 pieces of railway track is 412.6 metres long.

- (a) What is the length of each piece in metres ?
(b) Change your answer to centimetres.



3. There are 1000 squibiis in a martian pound.
How many martian pounds in :-

- (a) 3497 squibiis (b) 214.6 squibiis
(c) 21977 squibiis (d) 1 squibii ?



Exercise 7

1. Write down the answers to the following :-

- (a)
$$\begin{array}{r} 4.34 \\ \times 4 \\ \hline \end{array}$$
 (b)
$$\begin{array}{r} 8.27 \\ \times 7 \\ \hline \end{array}$$
 (c)
$$\begin{array}{r} 8.78 \\ \times 6 \\ \hline \end{array}$$
 (d)
$$\begin{array}{r} 119.38 \\ \times 9 \\ \hline \end{array}$$

(e) 5.7×8 (f) 42.3×4 (g) 135.9×5 (h) 7×37.521

2. Show all your working to the following questions :-

(a) Fred the monkey eats 3.74 kg of food every day.

What is the weight of food Fred will eat in :-

- (i) 3 days (ii) a week ?

(b) Boris the zookeeper gets paid £7.84 an hour.

How much will Boris earn in :-

- (i) 4 hours (ii) 9 hours ?

(c) Kevin the Camel eats six 3.71 kg boxes of dates every month.

Karen the Camel eats five 4.09 kg boxes.

Who eats the most and by how much ?



Decimals

Exercise 8

1. Copy and complete the following :-

(a) $2 \overline{)37.16}$

(b) $6 \overline{)91.44}$

(c) $7 \overline{)41.79}$

(d) $8 \overline{)129.12}$

2. Find :-

(a) $35.7 \div 7$

(b) $57.06 \div 6$

(c) $0.072 \div 8$

3. Show all your working for the following questions :-

(a) Nine bricks have a total length of 2.61 metres long.
What is the length of 1 brick ?



(b) Three kegs of beer hold 3071.6 litres.
How much beer does one keg hold ?



(c) Find :-
(i) a third of 20.8 (ii) a ninth of 51.66
(iii) a sixth of 6.06 (iv) a fifth of 0.7

4. Two shops sell identical shirts.
Shop A sells three shirts for £8.79.
Shop B sells five shirts for £14.75.



Which shop has the best deal ? Explain.

Exercise 9


You may use a calculator for this exercise but show all working.

1. Shreek the ogre has eight worm lollies each 7.8 cm in length.
What is the total length of all the lollies ?



2. Ben has a 5 litre jug.
0.32 litres, 1.056 litres and 1.9 litres poured into it.
How much more will the jug hold ?



3.  Senji buys six comics at £2.49 each.
How much change will he get from a £20 note ?

4. Marilyn buys eight concert tickets for £182.
How much was it for each ticket ?



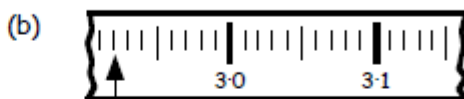
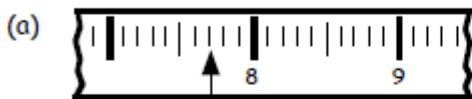
Decimals

Revision Exercise

1. What does the zero stand for in each number :-

- (a) 5.07 (b) 111.901 (c) 0.9815 (d) 5.1904

2. Which numbers are the arrows pointing to :-



3. Round to one decimal place :-

- (a) 0.849 (b) 5.7911 (c) 99.501 (d) $10 \div 6$

4. Do the following mentally and write down the answer :-

- (a) $21.72 + 5.48$ (b) $6 - 4.67$ (c) 2.63×5 (d) $5.964 \div 7$
(e) 0.61×10 (f) 7.821×100 (g) 1000×0.3247 (h) 4.32×200

5. A 5 metre length of cable is cut into 3 strips.

The first strip was 3.42 m.

The second strip was 0.75 m.

How long was the third strip.



6. Use a calculator and then round to one decimal place.

- (a) A barrel holds 140.6 litres of water. How much would 17 barrels hold ?
(b) Thirteen railway cars have total length 164.2 metres. What is the length of one
(c) A field with area 1875 metres is fenced into four equal section.
What is the area of each section ?
(d) Twenty sweets cost £1. How much for fifty sweets ?



Answers

Chapter 2 Exercise 5

1. a 84 b 98 c 76.2 d 187.1
 e 641 f 9.1 g 402.1 h 0.54
 i 5213 j 876.5 k 1004.1 l 4200
2. a 476.2 kg b 4762 kg
 c 47620 kg d 476200 kg
3. a 5000 b 7620 c 41.5 d 10

Chapter 2 Exercise 6

1. a 2.86 b 1.98 c 0.762 d 18.71
 e 0.641 f 0.1091 g 0.042 h 0.0054
 i 0.5213 j 0.0008 k 0.001004 l 0.009
2. a 4.126 m b 412.6 cm
3. a 3.497 b 0.2146 c 21.977 d 0.001

Chapter 2 Exercise 7

1. a 17.36 b 57.89 c 52.68 d 1074.42
 e 45.6 f 169.2 g 679.5 h 262.647
2. a (i) 11.22 kg (ii) 26.18 kg
 b (i) £31.36 (ii) £70.56
 c Kevin by 1.81 kg

Chapter 2 Exercise 8

1. a 18.58 b 15.24 c 5.97 d 16.14
2. a 5.1 b 9.51 c 0.009
3. a 0.29 m b 1024.2 l
 c (i) 6.6 (ii) 5.74 (iii) 1.01 (iv) 0.14
4. shop A each shirt 2p cheaper

Chapter 2 Exercise 9

1. 62.4 cm 2. 1.724 l 3. £5.06 4. £22.75
5. £400 6. 5 kg box – 9p/kg cheaper

Chapter 2 Revision Exercise

1. a tenths b hundredths
 c whole d thousands
2. a 7.7 b 2.92

Integers

3. Copy and find :-

- | | | | |
|-------------------|----------------|----------------|------------------|
| (a) $6 + 7$ | (b) $8 - 13$ | (c) $1 + (-5)$ | (d) $(-1) + 11$ |
| (e) $(-3) - 4$ | (f) $(-6) + 1$ | (g) $(-4) + 4$ | (h) $(-8) - 8$ |
| (i) $(-9) + (-9)$ | (j) $(-5) - 7$ | (k) $(-5) + 4$ | (l) $(-81) + 81$ |

Exercise 4

1. The coordinates of A are $(-3, 4)$.
Write the coordinates of the other points.

2. (a) Copy the set of axes from question 1.

(b) Plot the following six points :-

$J(2, 3)$, $K(-1, 5)$, $L(-4, 3)$,
 $M(-4, -1)$ and $N(2, -1)$.

(c) Name the shape formed when the six points are joined up in order.

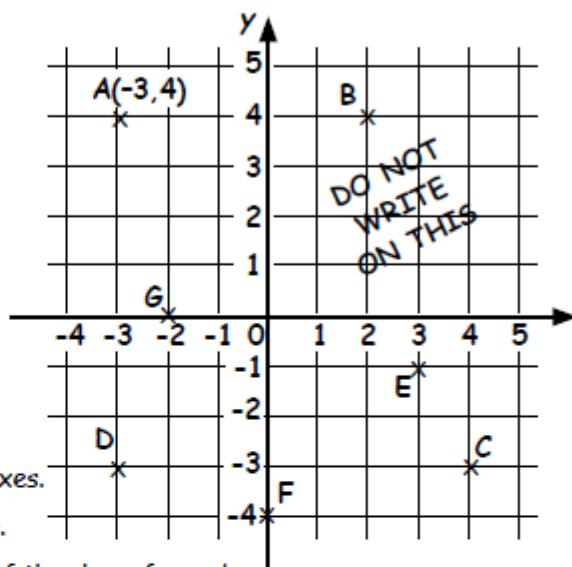
3. (a) Draw a set of axes from -5 to 5 on both axes.

(b) Plot the points $S(3, 2)$, $T(5, 2)$ and $U(6, 5)$.

(c) Join the three points and write the name of the shape formed.

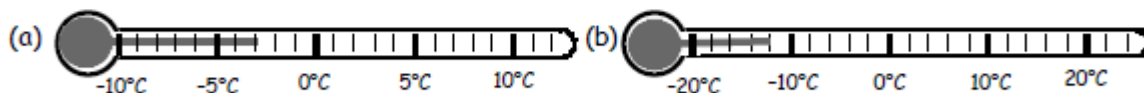
(d) Reflect this shape over the x -axis.

(e) Write the coordinates of the vertices of the new shape found.



Revision Exercise

1. Write the temperature shown by each thermometer.



2. Yesterday the temperature was 5°C .

Last night the temperature dropped by 12°C . What was the new temperature ?

3. Find (a) $7 + (-3)$ (b) $(-5) + 9$ (c) $(-3) + (-5)$ (d) $(-7) - 2$ (e) $(-15) - 5$

4. (a) Draw a set of axes from -5 to 5 on both axes.

(b) Plot the points $A(3, 1)$, $B(-3, 1)$ and $C(-3, -3)$.

(c) Plot and write the coordinate of a 4th point (call it D), such that ABCD is a rectangle.

(d) Reflect the rectangle over the y axis and write down the coordinates of its vertices.

Answers

3. a 13 b -5 c -4 d 10
 e -7 f -5 g 0 h -40
 i -18 j -12 k -1 l 0

Chapter 5 Exercise 4

1. B(2,4) C(4,-3) D(-3,-3) E(3,-1) F(0,-4) G(-2,0)
2. a/b see diagram c pentagon
3. a/b see diagram c triangle
 d see diagram e S'(3,-2) T'(5,-2) U'(6,-5)

Chapter 5 Revision Exercise

1. a -3°C b -12°C
2. -7°C
3. a 4 b 4 c -8 d -9
 e -20
4. a/b see diagram c D(3,-3)
 d A'(-3,-1) B'(2,1) C'(2,-3) D'(-3,-3)

Algebra

Exercise 1

1. Copy and simplify :-

(a) $8x + 4x$

(b) $3y - 2y$

(c) $9h + h$

(d) $12p - p$

(e) $5x + 3x + 4x$

(f) $9w + 5w + w$

(g) $c + c + c$

(h) $8k + 5k - 10k$

(i) $15q + 9q - 19q$

(j) $83d + 22d - 91d$

(k) $20z - 17z + z$

(l) $31h - 25h - 6h$

2. Copy and simplify :-

(a) $18x + 14x - 27x$

(b) $7y - y + 8y$

(c) $12i + 7i - 14i$

(d) $26t - t - t - t$

(e) $v + 11v + 4v - v$

(f) $90j^2 + 5j^2 - j^2$

(g) $h + 13h + 12h - 23h$

(h) $7u + 6u - 12u$

(i) $5g^2 + 9g^2 - 4g^2$

(j) $51e^3 + 29e^3 - 79e^3$

(k) $z - 5z + 7z$

(l) $31x - 35x - 6x$

Exercise 4

1. Copy each equation and solve :-

(a) $x + 4 = 7$

(b) $y + 2 = 12$

(c) $7 + y = 8$

(d) $p - 4 = 6$

(e) $5 - x = 13$

(f) $9 - w = 6$

(g) $c - 12 = 16$

(h) $14 - g = 0$

(i) $15 + e = 17$

(j) $8 + x = 7$

(k) $z - 3 = -1$

(l) $31 + a = -10$

2. Copy and simplify :-

(a) $2a = 10$

(b) $3y = 15$

(c) $9h = 81$

(d) $12p = 0$

(e) $5x = 75$

(f) $19w = 76$

(g) $11z = 121$

(h) $8k = 864$

(i) $15q = 300$

(j) $10k = 3000$

(k) $20z = 6000$

(l) $6h = 27$

Exercise 5

1. Find the value of each variable by solving the equations :-

(a) $2x + 4 = 16$

(b) $3y + 1 = 13$

(c) $5y + 4 = 9$

(d) $8p - 1 = 23$

(e) $2x - 7 = 13$

(f) $9 + 2w = 15$

(g) $7c - 12 = 9$

(h) $14 - 5g = 4$

(i) $15 - 4e = -1$

(j) $8 + 4x = 0$

(k) $12z - 3 = 57$

(l) $31 - 2a = -2$

Algebra

Revision Exercise

1. Simplify :-

(a) $8x + 4x$

(b) $6y - 2y$

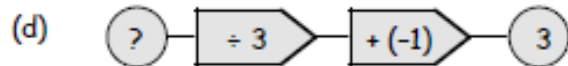
(c) $5k + 2k - 4k$

(d) $8d - 7d$

(e) $w + 3w - 2w$

(f) $4h^2 + 5h^2 - 3h^2$

2. Write the unknown number :-



3. If $s = 2$, $t = 3$, $u = 4$ and $v = 5$ find :-

(a) $3s + 2t + u - 2v$

(b) $stu - 5v$

(c) $v^2 + u^2 - (st)^2$

4. Solve :-

(a) $x + 6 = 8$

(b) $y - 7 = 9$

(c) $2x + 1 = 11$

(d) $5h - 7 = 43$

(e) $\frac{1}{2}k = 16$

(f) $\frac{1}{5}y + 1 = 3$

Answers

Chapter 8 Exercise 1

- | | | | |
|------------|-----------|---------|----------|
| 1. a $12x$ | b y | c $10h$ | d $11p$ |
| e $12x$ | f $15w$ | g $3c$ | h $3k$ |
| i $5q$ | j $14d$ | k $4z$ | l 0 |
| 2. a $5x$ | b $14y$ | c $5i$ | d $23t$ |
| e $15v$ | f $94j^2$ | g $3h$ | h u |
| i $10g^2$ | j e^3 | k $3z$ | l $-10x$ |

Chapter 8 Exercise 4

- | | | |
|------------|-----------|--------------------|
| 1. a $x=3$ | b $y=10$ | c $y=1$ |
| d $p=10$ | e $x=2$ | f $w=3$ |
| g $c=28$ | h $g=14$ | i $e=2$ |
| j $x=-1$ | k $z=2$ | l $a=-1$ |
| 2. a $a=5$ | b $y=5$ | c $h=9$ |
| d $p=0$ | e $x=15$ | f $w=4$ |
| g $z=11$ | h $k=108$ | i $q=20$ |
| j $k=300$ | k $z=300$ | l $h=4\frac{1}{2}$ |

Chapter 8 Exercise 5

- | | | |
|------------|----------|---------|
| 1. a $x=6$ | b $y=4$ | c $y=1$ |
| d $p=3$ | e $x=10$ | f $w=3$ |
| g $c=3$ | h $g=2$ | i $e=2$ |
| j $x=-2$ | k $z=5$ | l $a=5$ |

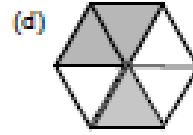
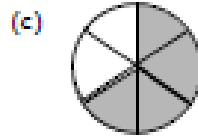
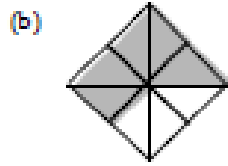
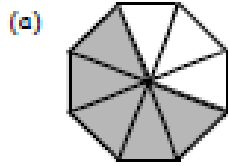
Chapter 8 Revision Exercise

- | | | | |
|------------|----------|---------|----------|
| 1. a $12x$ | b $4y$ | c $3k$ | d d |
| e $2w$ | f $6h^2$ | | |
| 2. a 21 | b -1 | c 5 | d 12 |
| 3. a 6 | b -1 | c 5 | |
| 4. a $x=2$ | b $y=16$ | c $x=5$ | d $h=10$ |
| e $k=32$ | f $y=10$ | | |

Fractions/Percentages

Revision Exercise

1. For each shape, say what fraction has been shaded :-



2. Simplify each of the following fractions :-

(a) $\frac{7}{14}$

(b) $\frac{3}{12}$

(c) $\frac{14}{42}$

(d) $\frac{11}{88}$

(e) $\frac{12}{78}$

(f) $\frac{6}{84}$

(g) $\frac{26}{626}$

(h) $\frac{27}{126}$

3. Find :-

(a) $\frac{1}{3}$ of 66

(b) $\frac{3}{4}$ of 48

(c) $\frac{8}{9}$ of 27

(d) $\frac{6}{7}$ of 616

4. Write these as fractions in their simplest form :-

(a) 50%

(b) 25%

(c) 64%

(d) 76%

(e) 20%

(f) $66\frac{2}{3}\%$

(g) $33\frac{1}{3}\%$

(h) 12.6%

5. Change these fractions into percentages :-

(a) $\frac{7}{10}$

(b) $\frac{2}{6}$

(c) $\frac{1}{3}$

(d) $\frac{17}{20}$

(e) $\frac{24}{40}$

(f) $\frac{20}{30}$

(g) $\frac{225}{1000}$

(h) $\frac{3}{8}$

6. Calculate :-

(a) 20% of £75

(b) 65% of \$840

(c) $12\frac{1}{2}\%$ of 808 kg

7. Kris had £120, ($\frac{3}{5}$ of his original holiday money). How much did Kris start with ?

Answers

Chapter 6 Revision Exercise

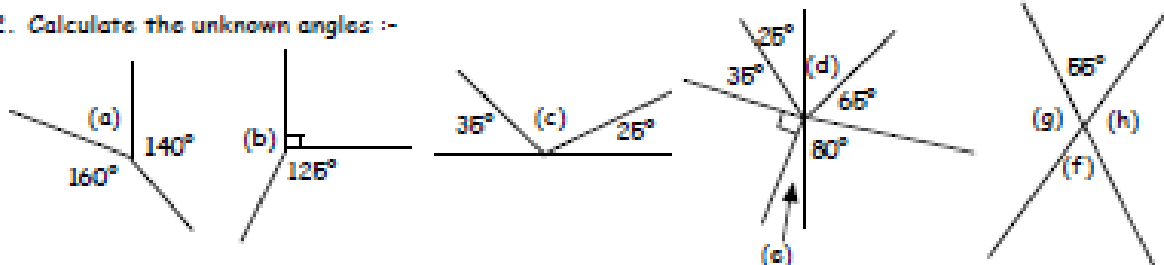
- | | | | |
|--------------------|------------------|-------------------------------|---------------------|
| 1. a $\frac{5}{8}$ | b $\frac{5}{8}$ | c $\frac{4}{6} (\frac{2}{3})$ | d $\frac{1}{2}$ |
| 2. a $\frac{1}{2}$ | b $\frac{1}{4}$ | c $\frac{1}{3}$ | d $\frac{1}{8}$ |
| e $\frac{2}{13}$ | f $\frac{1}{14}$ | g $\frac{1}{25}$ | h $\frac{3}{14}$ |
| 3. a 22 | b 36 | c 24 | d 60 |
| 4. a $\frac{1}{2}$ | b $\frac{1}{4}$ | c $\frac{16}{25}$ | d $\frac{3}{4}$ |
| e $\frac{1}{5}$ | f $\frac{2}{3}$ | g $\frac{1}{3}$ | h $\frac{1}{8}$ |
| 5. a 70% | b 40% | c $33\frac{1}{3}\%$ | d 85% |
| e 60% | f 66% | g $22\frac{1}{2}\%$ | h $37\frac{1}{2}\%$ |
| 6. a £15 | b \$36 | c 101 kg | |
| 7. £200 | | | |

Angles

Exercise 3

1. Copy and complete :- Angles round a point will always add up to°.

2. Calculate the unknown angles :-



3. How many degrees in :- (a) a half turn (b) a quarter turn

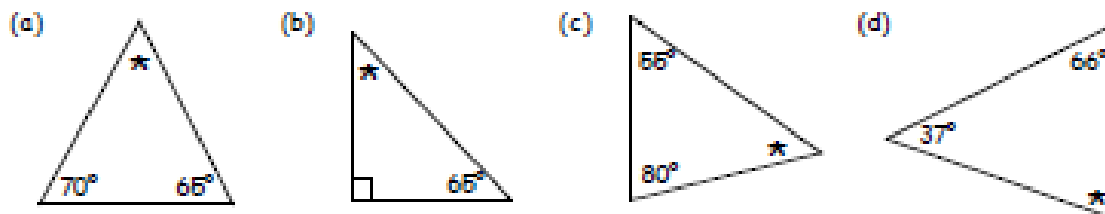
(c) an eighth turn (d) a twelfth turn ?

4. Write the supplement of :- (a) 60° (b) 150° (c) 137°
 (d) 174° (e) 1° (f) $33\frac{1}{3}^\circ$

Exercise 4

1. Copy and complete :- The angles in a triangle will always add up to°.

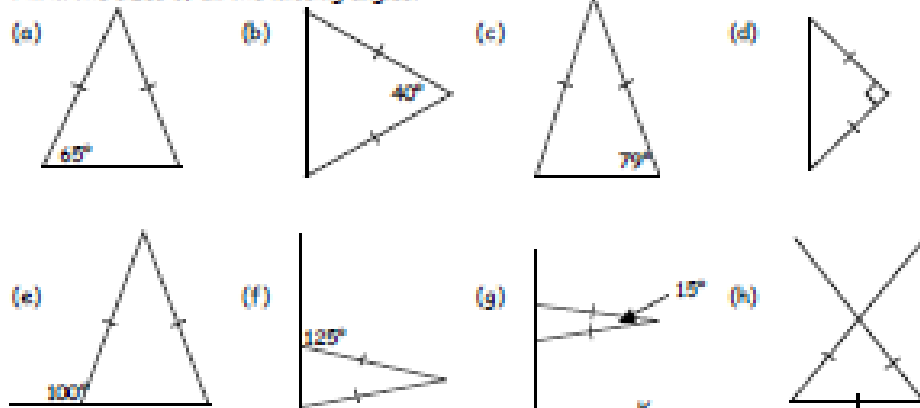
2. Calculate the angle marked * in each of these triangles :-



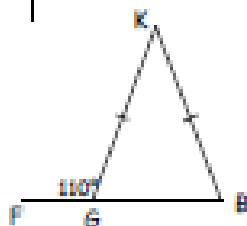
Angles

3. Make a neat rough sketch of each of the following diagrams.

Fill in the sizes of all the missing angles.



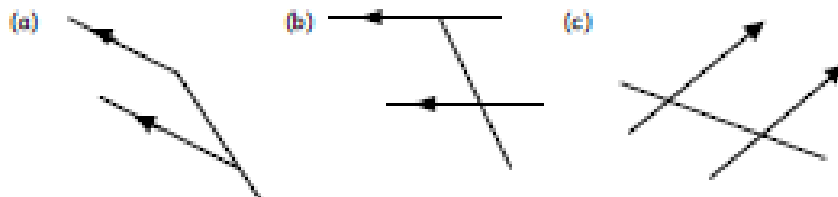
4. Name and write down the sizes of all the angles in the diagram.



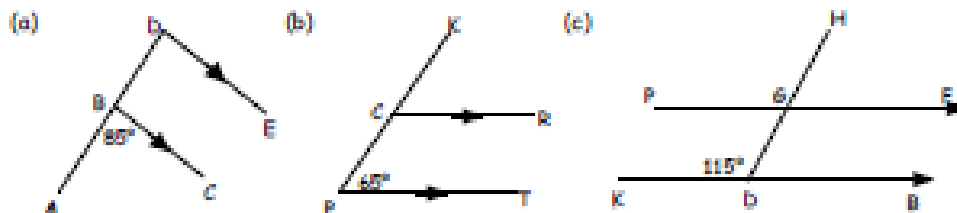
Exercise 5

1. Copy and complete :- Corresponding (F) angles are e.....

2. Copy the diagrams and show all the corresponding (F) angles :-

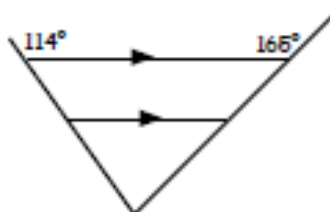
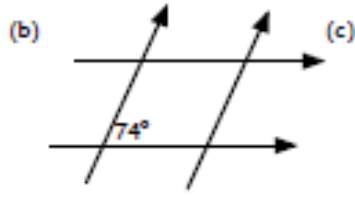
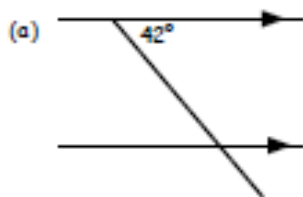


3. Write down all the angles in the following diagrams :- (e.g. $\angle ABC = 85^\circ$).



Angles

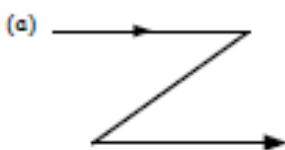
4. Sketch each of the following and fill in all the missing angles :-



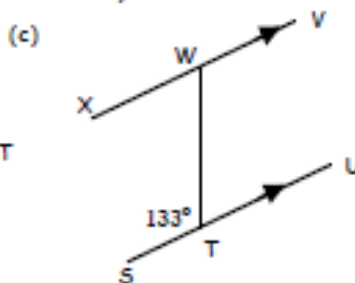
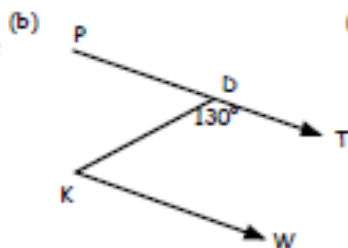
Exercise 6

1. Copy and complete :- Alternate (Z) angles are e.....

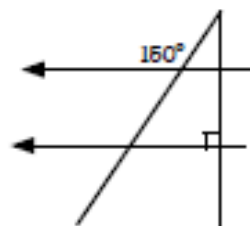
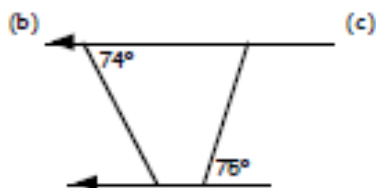
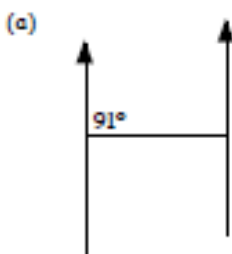
2. Copy the diagrams and show all the alternate (Z) angles :-



3. Write down all the angles in the following diagrams :- (e.g. $\angle ABC = 69^\circ$).



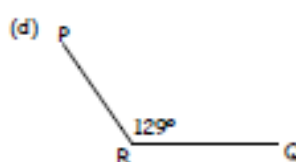
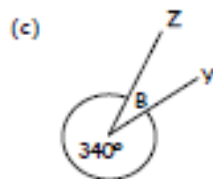
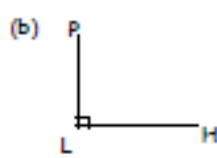
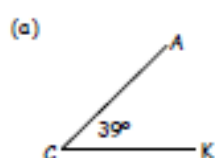
4. Sketch each of the following and fill in all the missing angles :-



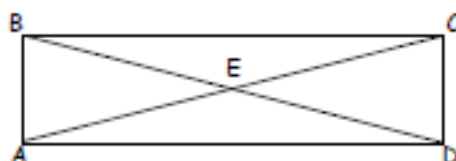
Angles

Revision Exercise

1. Write the type and name of each angle shown :-
(e.g. acute $\angle ABC = 69^\circ$)

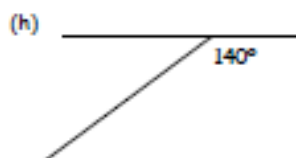
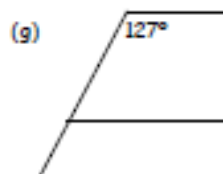
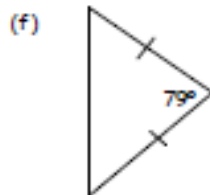
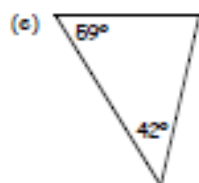
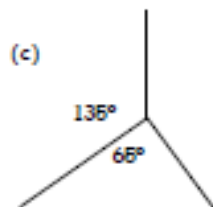
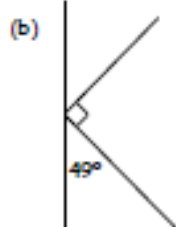
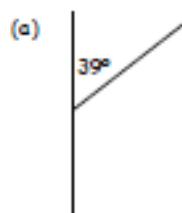


2. Name all the acute angles in this diagram.

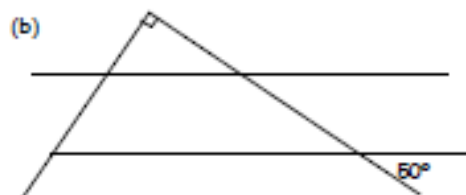
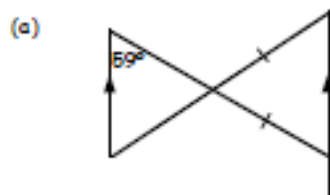


3. Make a neat rough sketch of each of the following diagrams.

Fill in all the missing angles.



4. Sketch each of the following and fill in all the missing angles :-



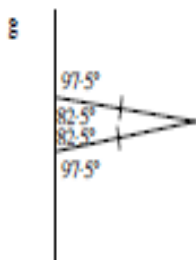
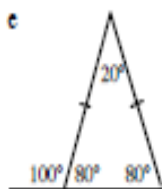
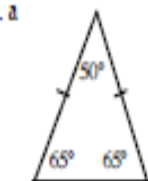
Angles

Chapter 12 Exercise 3

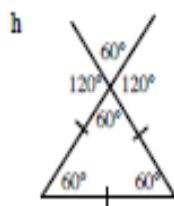
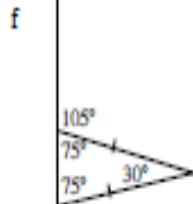
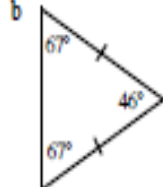
1. 360°
 2. a 60° b 145° c 120° d 55°
 e 10° f 55° g 125° h 125°
 3. a 180° b 90° c 45° d 30°
 4. a 120° b 30° c 43° d 6°
 e 179° f $146\frac{2}{3}^\circ$

Chapter 12 Exercise 4

1. 180°
 2. a 45° b 25° c 45° d 77°
 3. a

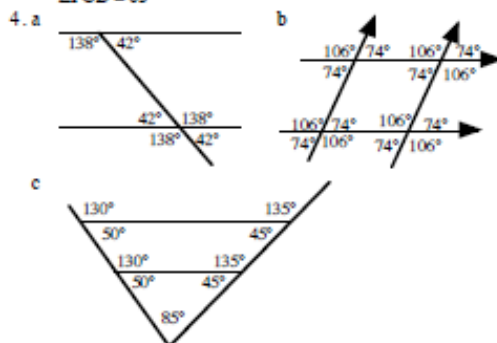


- b



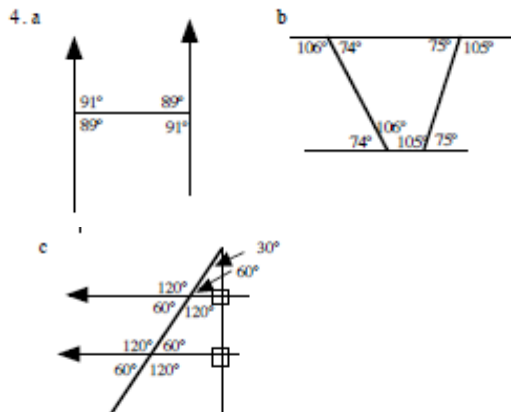
4. a $\angle KGB$ $\angle GBK$ $\angle BKG$
 b 70° 70° 40°

1. equal
 2. a to c see diagrams
 3. a $\angle BDE = 85^\circ$ $\angle DBC = 95^\circ$
 b $\angle KCR = 65^\circ$ $\angle PCR = 115^\circ$
 c $\angle PGH = 115^\circ$ $\angle HGF = 65^\circ$
 $\angle GDB = 65^\circ$ $\angle FGD = 115^\circ$
 $\angle PGD = 65^\circ$



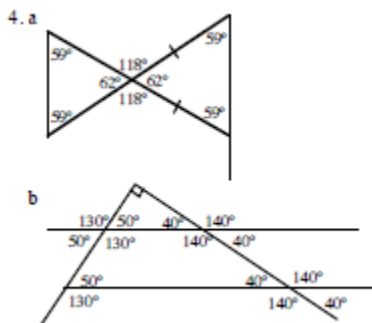
Chapter 12 Exercise 6

1. equal
 2. see diagrams
 3. a $\angle GAB = 69^\circ$
 b $\angle PDK = 50^\circ$ $\angle DKW = 50^\circ$
 c $\angle UTW = 47^\circ$ $\angle XWT = 47^\circ$
 $\angle VWT = 133^\circ$



Chapter 12 Revision Exercise

1. a acute $\angle ACK = 39^\circ$ b right $\angle PLH = 90^\circ$
 c reflex $\angle ZBY = 340^\circ$ d obtuse $\angle PRQ = 129^\circ$
 2. $\angle BCE$, $\angle CBE$, $\angle BEA$, $\angle BAE$, $\angle EBA$, $\angle CED$, $\angle ECD$,
 $\angle EDC$, $\angle EAD$, $\angle EDA$
 3. a 131° b 48° c 150°
 d 54° , 126° , 126° e 79°
 f 50° , 50° g 127° , 53°
 h 40° , 40°



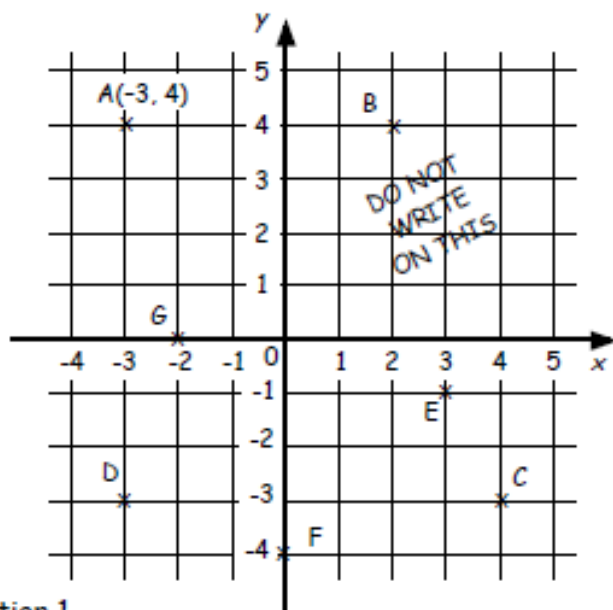
Coordinates

Exercise 1

Coordinates in 4 quadrants

1. Write down the coordinates of :-

- each point shown in the diagram.
- the point on the y axis.
- all the points with the same x coordinate.
- all the points with the same y coordinate.
- the point with the same x and y coordinates.
- the fourth vertex, P of the rectangle $DABP$.

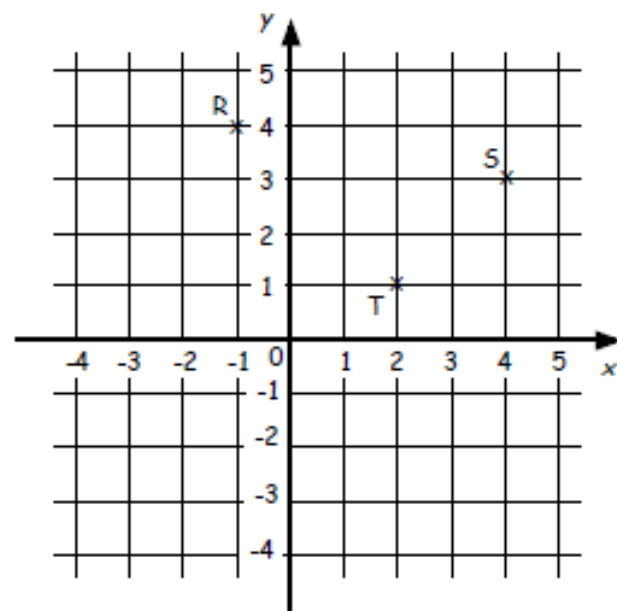


2. a Copy the same axes grid from question 1.

- Plot the points $P(2, 3)$, $Q(4, 0)$, $R(2, -3)$, $S(-2, -3)$, $T(-4, 0)$.
- Plot the point U , where $PQRSTU$ are the vertices of a hexagon.

3. Look at the diagram shown.

- Write down the coordinates of R , S and T .
- Reflect RST over the x -axis and write down the coordinates of $R'S'T'$.
- Reflect $R'S'T'$ over the y -axis and write down the coordinates of $R''S''T''$.



4. The vertices of a triangle reflected over the y -axis and then the x -axis are $A''(1, 5)$, $B''(7, 0)$ and $C''(2, 2)$.

State the coordinates of the original triangle ABC .

Coordinates

Revisit - Review - Revise Exercise 5

1. Write down all the coordinates :-

- shown on the diagram.
- that lie on either axes.
- that have the same x and y coordinate.

2. PJSN are the vertices of a parallelogram.

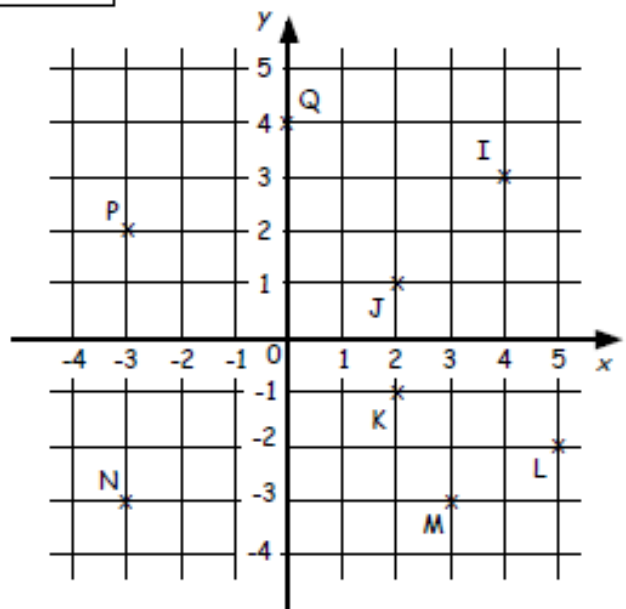
State the coordinates of vertex S.

3. a Copy the axes above.

b Plot the points R(1, 3), S(-4, 2), T(-3, -2) and U(2, -4).

c Draw a vertical line which cuts through (2,0).

d Reflect RSTU over the dotted line.



Answers

Exercise 1 - Coordinates in 4 Quadrants

- $A(-3,4)$, $B(2,4)$, $C(4,-3)$, $D(-3,-3)$,
 $E(3,-1)$, $F(0,-4)$, $G(-2,0)$
 - F c $A \& D$ d $A \& B$, $D \& C$
 - D f $P(-2,-3)$
- a/b See diagram c $U(-2,3)$
- $R(-1,4)$, $S(4,3)$, $T(2,1)$
 - see diagram - $R'(-1,-4)$, $S'(4,-3)$, $T'(2,-1)$
 - see diagram - $R''(1,-4)$, $S''(-4,-3)$, $T''(-2,-1)$
- $A(-1,-5)$, $B(-7,0)$, $C(-2,-2)$

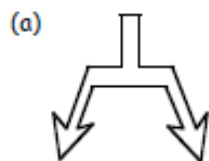
Review - Revisit - Revise Exercise 5

- $I(4,3)$, $J(2,1)$, $K(2,-1)$, $L(5,-2)$,
 $M(3,-3)$, $N(-3,-3)$, $P(-3,2)$, $Q(0,4)$
 - $Q(0,4)$ c $N(-3,-3)$
- $S(2,-4)$
- $a/b/c$ See diagram
 - $R'(3,3)$, $S'(8,2)$, $T'(7,-2)$, $U'(2,-4)$

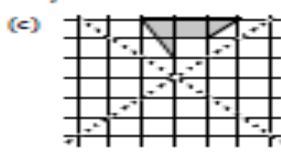
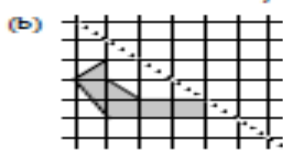
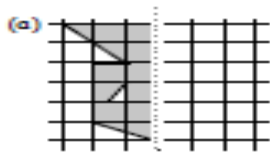
Symmetry

Revision Exercise

1. Write down how many lines of symmetry are in each of these shapes :-



2. Copy each of the following shapes neatly, and complete each one such that the dotted line is a line of symmetry.



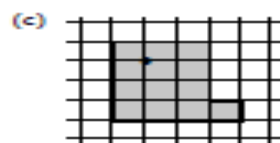
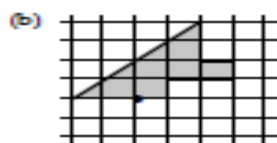
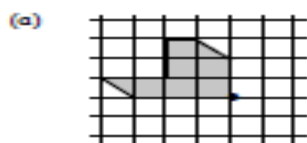
3. Which, if any, of these shapes have half-turn symmetry?



4. (a) For each shape in question 3, say what kind of turn symmetry it has, ($\frac{1}{2}$, $\frac{1}{3}$, etc).

(b) State the order of each shape from question 3.

5. Copy each shape and give each a half turn around the dot.



6. (a) Make a copy of the tile shown.

(b) Draw twelve congruent tiles to "tile the plane".



7. Which of the following tiles will not cover the plane.



Answers

Chapter 7 Revision Exercise

1. a 1 b 0 c 1 d 20

2. check diagrams

3. a/b & c

4. a $\frac{1}{6}, \frac{1}{4}, \frac{1}{2}, \frac{1}{7}$

 b 6, 4, 2, 7

5. - 6. check diagrams

7. a/b & d

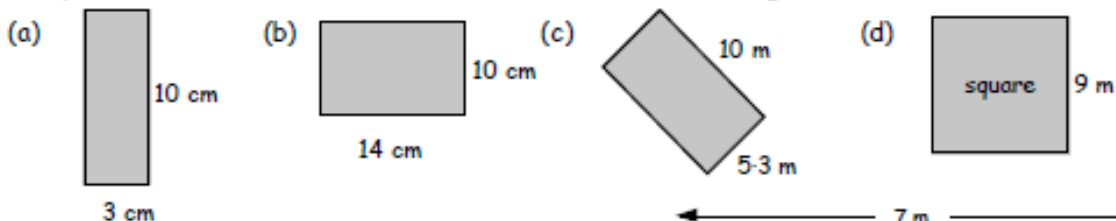
Area

Exercise 4

1. Copy and complete :-

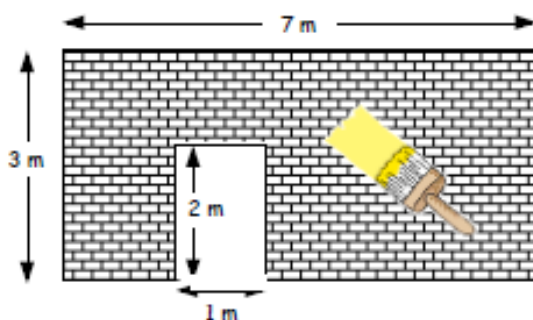
The formula for calculating the area of a rectangle is $A = \dots \times \dots$

2. Use your formula to calculate the areas of each of the following :-



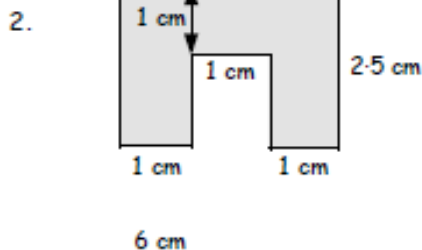
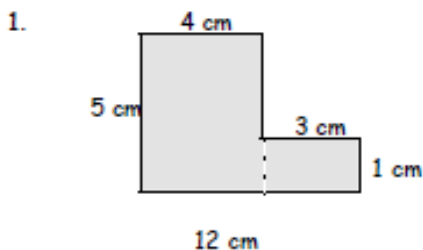
3. A wall is to be painted. A litre of paint will cover 3m^2 and costs £4.50 per litre.

- (a) Calculate the area of the doorway.
(b) Calculate the area of the wall to be painted.
(c) How much will it cost to paint the wall ?

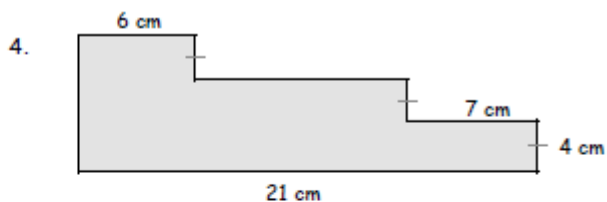
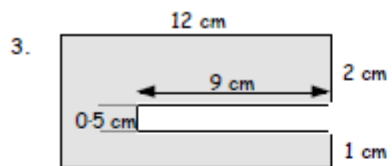


Exercise 5

Calculate the shaded area of each of the following shapes :-
(Show all your working).

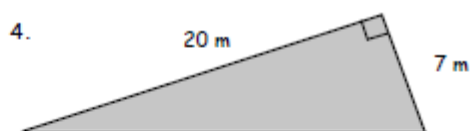
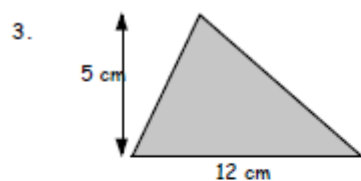
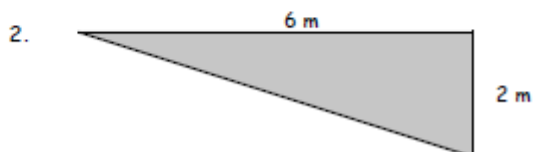
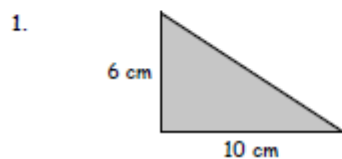


Area

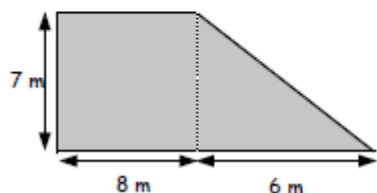


Exercise 6

Find the area of each of the triangles :-

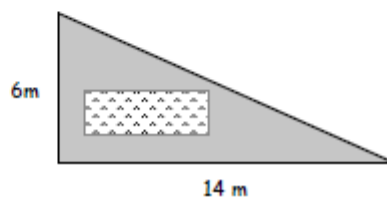


5. Calculate the total area of the composite shape shown:-



6. A triangular garden is to be turfed has a rectangular flower bed (area 16m^2).

Find the (shaded) area of the garden to be turfed.



Area

Chapter 10 Exercise 4

1. $A = \text{length} \times \text{breadth}$

2. a 30 cm^2 b 140 cm^2 c 53 m^2

 d 81 m^2

3. a 2 m^2 b 19 m^2 c $\text{£}22.50$

Chapter 10 Exercise 5

1. 23 cm^2 2. 6 cm^2 3. 38 cm^2

4. 196 cm^2

Chapter 10 Exercise 6

1. 30 cm^2 2. 6 m^2 3. 30 cm^2

4. 70 m^2 5. 91 m^2 6. 26 m^2

Statistics

Exercise 1

1. Find the mean and range of :-

(a) 2, 3, 6, 5, 2, 9, and 8

(b) 41, 37, 53, and 45

(c) 13, 12, 12, 15, 14 and 15

(d) 3-1, 2-5, 3-8, 3-4 and 3-9.

2. In the first six months of the church lottery, £6360 in prizemoney was paid out.

How much on average was paid each month ?



3. Josh is a computer games whizkid.

He completed each level of DEATHGAME in the following times (in minutes) :-

8-6, 9-5, 8-8, 7-9, 10-1, 8-9, 8-1, 8-3 and 9.

What was his mean time per level ?



4. In the first four weeks of selling ice-cream, Tony had made a profit of £876.

(a) How much was the average profit each week ?

(b) How much was the average profit per day ?



5. In their last five home games the following scores were recorded at Hawick rugby club :-

15 - 10, 12 - 5, 0 - 25, 21 - 15, 7 - 5.

(In all home games Hawick scores come first).

(a) Find the range of the (i) home scores, (ii) away scores.

(b) Find the average points Hawick scored.

(c) Find the average points of the away teams.

(d) Why do you think the away teams average is higher ?



6. The mean weight of 3 boys is 37 kg.



Andy weighs 36 kg, Bill weighs 34 kg. Calculate the weight of Colin.

Statistics

Exercise 2

1. The ages of the people at a disco were recorded :-

17 18 18 19 20 21 21 20 16 17 18
19 20 20 21 19 20 21 18 18 19 18

Age	tally	frequency
16		1
17		2
18	---	3
19	---	3
20	---	3
21	---	3

(a) Organise the data into a frequency table using tally marks.

(b) How many pupils were older than 19 years old.

(c) What was the most common age at the disco ?

2. The time taken for each music track at the disco were as follows (in minutes) :-

11 8 12 13 7 11 12 13 12 10 10
9 10 10 11 9 10 11 8 8 9 8



Organise the data into a frequency table.

3. The disco recorded the number of crates sold :-

Crates	water	beer	alcho-pop	orange
number	20	12	6	9

Draw and label a neat horizontal bar graph to represent the information in the table.

4. Concert in the park ticket prices are shown in the tables below :-

	noon	3 pm	5 pm	8 pm
Zone 1	£4	£8	£12	£15
Zone 2	£5	£9	£15	£25

	Zone 1			Zone 2		
Saturday	£4	£8	£12	£6	£10	£15
Sunday	£5	£9	£15	£8	£12	£25



How much would it cost for a ticket on :-

(a) Saturday 3 pm Zone 1

(b) Sunday 4 pm Zone 2

(c) Sunday 7 pm Zone 2

Henry paid for an £18 ticket.

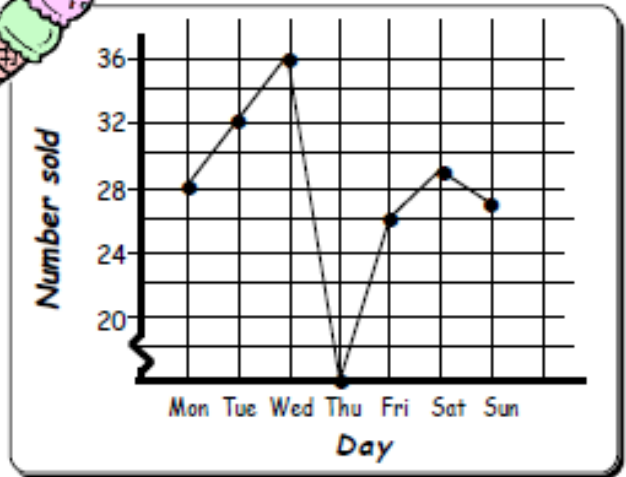
(d) In waht zone and when can Henry attend the concert ?

(e) What zone, day and times are the best bands on stage ? (Give a reason for your answer).

Statistics

Exercise 3

1. The line graph show the sales of Tony's ice-cream one week in July.



(a) How many ice-cream's did Tony sell on

- (i) Monday (ii) Friday
(iii) Saturday (iv) Sunday ?

(b) Tony was ill one day and could not drive his van to work.

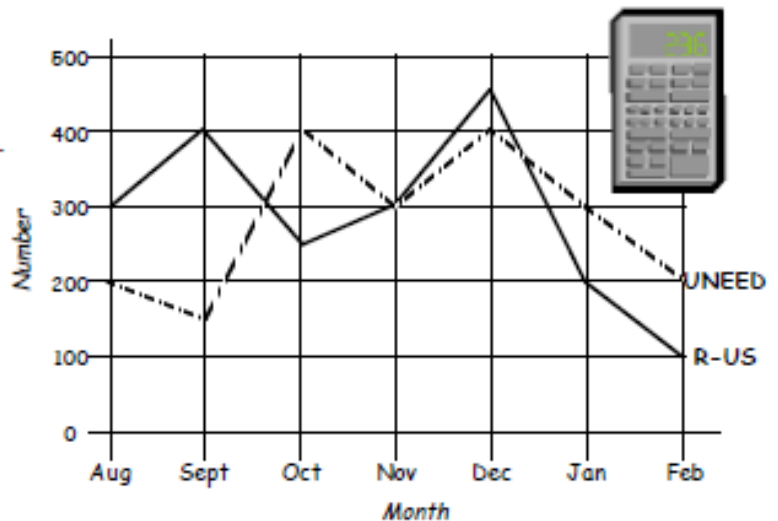
What day was Tony ill ?

(c) What day do you think was the hottest day ? Explain.

(d) What were the total number of ice-creams sold that week.

(e) What was the mean number of ice-creams sold per day over the seven days ?

2. The comparative line graph shows the sales of calculators from two different companies *CALC-R-US* and *CALCUNEEDED*.



(a) How many calculators did *CALCUNEEDED* sell in :-

- (i) August
(ii) September
(iii) January ?

(b) One company had a big advertising campaign between September and October.

Which company ? Explain.

(c) Calculate the mean sales of each company per month.

(d) Which company do you think had better sales ? Explain.

3. Three companies computer sales are as shown.

Draw a comparative line graph showing the sales information of the three companies.

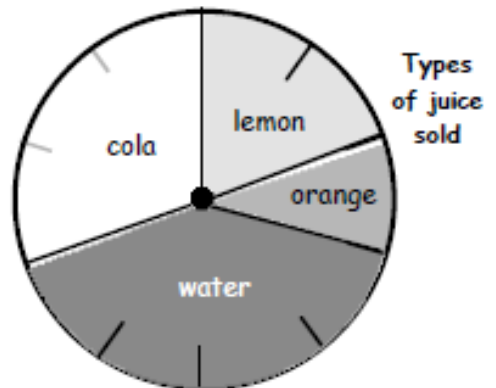
	Jan	Feb	Mar	Apr	May	Jun
JDK	100	200	300	200	300	400
IPS	300	250	150	200	400	450
HB	350	500	400	250	300	325

Statistics

Exercise 4

1. The pie chart shows the results of school tuck shop juice sold.

- (a) What percentage does each section represent ?
- (b) What percent of the sales were:-
- (i) Lemon
 - (ii) Water
 - (iii) Cola and orange

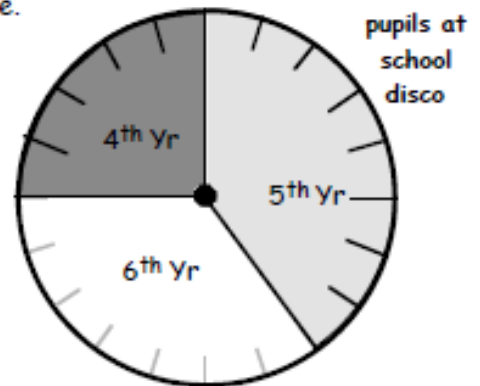


2. This pie chart shows this years senior school disco attendance.

- (a) What percentage of the pupils were
- (i) 4th year
 - (ii) 5th year
 - (iii) 6th year ?
- (b) If 480 pupils attended the disco, write the attendance of each year group.
- (c) Last year, of the 480 in attendance half were sixth year, an eighth were fourth year and the rest were fifth year.

Copy or trace the outline of this pie chart.

Show last years disco attendance.



You need a protractor for question 3.

3. At local cup final, a crowd 720 people attended. 180 supported Rovers, 270 supported United and the rest of the spectators were there just to see a good game !

Draw a pie chart to show this information.
(hint : remember there are 360° in a pie chart).



Answers

Chapter 9 Exercise 4

1. a 10%
b (i) 20% (ii) 40% (iii) 40%
2. a (i) 25% (ii) 40% (iii) 35%
b 4th year – 120 5th year – 192 6th year – 168
c see diagram
3. see diagram
Rovers – 50% United – 30% Rest – 20%

Chapter 9 Exercise 1

1. a 5 (7) b 44 (16) c 14 (6) d 3.3 (1.4)
2. £1060 3. 8.8
4. £219
5. a (i) 21 (ii) 20 b 11 c 12
d Hawick lost 25 pts in one game
6. 41 kg

Chapter 9 Exercise 2

1. a

Time	Tally	Freq
16		1
17		2
18		6
19		4
20		5
21		4

b 9 c 18

2.

Time	Tally	Freq
7		1
8		4
9		3
10		5
11		4
12		3
13		2

3. see diagram

4. a £4 b £12 c £25
d Saturday Zone 1 from 8 pm
e Sunday from 5 pm (Zone 2 highest price)

Chapter 9 Exercise 3

1. a (i) 28 (ii) 26 (iii) 29 (iv) 27
b Thursday c Wednesday (sold most ice creams)
d 175 e 25
2. a (i) 200 (ii) 150 (iii) 300
b CALCUNEEED (large sales increase)
c CALCUNEEED 325 CALC-R-US 350
d CALC-R-US (higher mean sales)
3. see diagram