Schofield & Sim

A

Answer

1 $2300 + 970 + 1700 =$ _____

2 $\frac{7}{8} \div 7 =$ _____

3 70% of 360° = _____ °

4 $(15 \times 8) \div 6 =$ _____

5 379m + 221m = ☐ km _____ km

6 $\frac{£2.50 \times 12}{6} =$ £☐ £ _____

7 a $\frac{1}{2}$l + x ml = 615ml. Find x. a _____ ml

b $\frac{1}{2}$l − 368ml = y ml. Find y. b _____ ml

8 a $0.3 \times 0.2 =$ a _____

b $0.06 \div 0.2 =$ b _____

9 $\frac{1}{4} + \frac{5}{16} =$ _____

10 2.475m ÷ 9 = ☐ mm _____ mm

11 Subtract 17 from 9. _____

12 $24.8 \times 1.6 =$ ☐ _____

$248 \times 16 = 3968$

B

Answer

1 How many quarters are there in 36? _____

2 Write as a fraction in its simplest form.

a $\frac{4}{1000}$ b $\frac{45}{1000}$ c $\frac{28}{1000}$ a _____ b _____ c _____

3 1kg costs £4.00. Find the cost of 700g. £ _____

4 Find the product of 20 and 0.005. _____

5 How many centimetres remain when 268cm are taken from 3.4m? _____ cm

6 Write to the nearest second decimal place.

a 53.176 a _____

b 24.694 b _____

7 Find the mean of 1.1, 2.3 and 0.8. _____

8 Share 3kg in the ratio 1:4. _____ kg _____ kg

9 Which year is MDCXXXII? _____

10 Find the area in cm² of a square of side 11cm. _____ cm²

11 Which two numbers have a sum of 20 and a product of 36? _____ _____

12 Deduct (£1.15 × 3) from (£18 ÷ 5). _____ p

C

Answer

1 The approximate population of a city is 1.2 million. The actual population is 1 207 806. Find the difference. _____

2 Two parcels together have a mass of 18.5kg. One of them is 4kg heavier than the other. Find the mass of each parcel. _____ kg _____ kg

3 Which of these shapes will have a circular face when cut horizontally, and a rectangular face when cut vertically? _____

sphere cone cylinder

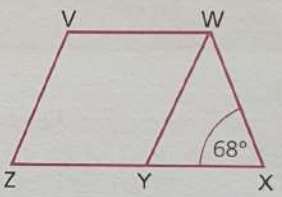
4 In a class of 30 children 12 were absent. Write the number absent as

a a fraction in its simplest form a _____

b a ratio. b _____

5 A bagel costs 35p. How many can be bought for £7.00? _____

6



VWYZ is a rhombus. WXY is an isosceles triangle. Find

a ∠ WYZ a _____ °

b ∠ VWY b _____ °

c ∠ ZVW. c _____ °

7 Tom has 95p and Sophie has 73p. How much must Tom give to Sophie so that each has the same amount? _____ p

8 If 1 July falls on a Thursday how many Saturdays will there be in that month? _____

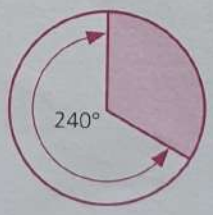
9 One child in every four in a school of 200 walks to school.

a What percentage do not walk to school? a _____ %

b How many walk to school? b _____

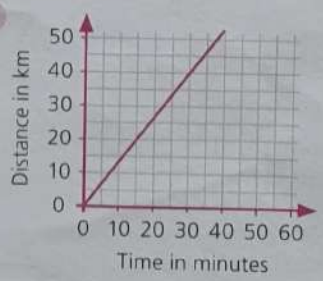
10 Write the coordinates of the point (3, 5) when reflected in the x-axis. (_____ , _____)

11



The area of the circle is 321cm². Find the area of the shaded sector. _____

12



The graph shows the speed of a car. Use the graph to find the time taken by the car to travel 40km. _____ min

A

Answer

1 £1.20 × $3\frac{1}{2}$ = £ _____

2 $\frac{2.64 + 3.36}{2}$ = _____

3 2.25ml – (250ml × 6) = ▢ ml _____ ml

4 $\frac{20}{24} \div 25$ = _____

5 1200km – (320km + 280km + 335km) = _____ km

6 a $\frac{1}{8}$ = ▢ % a _____ %

b $\frac{3}{8}$ = ▢ % b _____ %

7 9.8 ÷ 4 = _____

8 £5.00 – £▢ = £2.82 £ _____

9 £6 × $\frac{2}{5}$ = £ _____

10 9x = 33 + 48. Find the value of x. _____

11 Find the cost of 30cm at £1.80 per metre. _____ p

12 $\frac{1}{7}$ of 4kg 60g = ▢ g _____ g

B

Answer

1 Add $\frac{3}{4}$ of 28 to $\frac{7}{8}$ of 56. _____

2 $(4 \times 10^3) + (2 \times 10^2)$ = _____

3 Increase £3.00 by 7%. £ _____

4 Write $\frac{3}{8}$ as a decimal fraction. _____

5 Find the total mass in kilograms of these amounts of water. _____ kg

2.7l	95ml	3.4l

6 One pear costs 17p. Find the cost of a £ _____

a 10 b 1000. b £ _____

7 A rhombus has an area of 100cm². Its base is 5cm. Find its height in millimetres. _____ mm

8 Approximate 4 635 000 to

a the nearest 1 000 000 a _____

b the nearest 100 000. b _____

9 Write the year 1916 using Roman numerals. _____

10 Find the difference in hundredths between 100 × 0.016 and 100 × 0.017. _____ hundredths

11 Express 43 ÷ 5 as

a a mixed number a _____

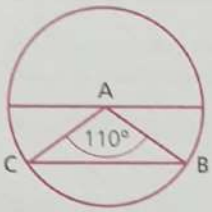
b a decimal. b _____

12 Multiply £1.50 by 52. £ _____

C

Answer

1 A cask holds 20.75l of water. The mass of the cask when empty is 850g. Find the mass of the cask when it is full. _____ kg

2 

A is the centre of the circle.

a Name the triangle ABC by its sides. a _____

b Calculate the angle at B. b _____ °

3 Six pairs of socks cost £8.37. Find to the nearest penny the cost of one pair of socks. £ _____

4 There are 4.545l of shampoo in a plastic container. The shampoo lasts for nine weeks. How many millilitres are used on average per week? _____ ml

5 

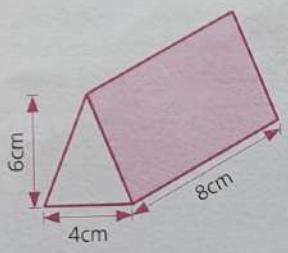
There was 87p change from £3 after buying the multipack. Find the cost of each bottle. _____ p

6 Find in litres the volume of

a one multipack a _____ l

b eight multipacks. b _____ l

7 A map is drawn to a scale of 1cm to 1km. How many metres are represented on a map by a line 14mm long? _____ m

8 

Find

a the area of the triangular end of the prism a _____

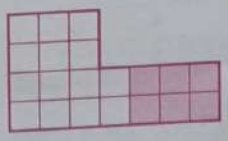
b the volume of the prism. b _____

9 A car averaged 8km to a litre of petrol on a four-hour journey of 312km.

a How many litres were used on the journey? a _____ l

b What was the average speed? b _____ km/h

10 The price of a pair of shoes costing £25 increased by £1.25. Write the increase as a percentage. _____ %

11 

Write the proportion of shaded squares

a as a fraction in its simplest form a _____

b as a decimal. b _____

12 Matthew arrived at a hotel on 29 October and left on 3 November. The charge for the room was £10.50 per night. What was the total cost of the room? £ _____

Schofield & Sims

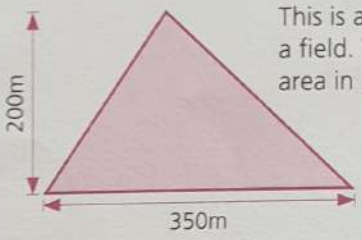
A

	Answer
1 2.999 ÷ 0.1 =	
2 $\frac{40}{45} \div 8 =$	
3 6.25% of £4.00 = ■p	p
4 £3.24 = ■ × 2p	
5 86.6 × 200 =	
6 5.2l − 480ml = ■l	l
7 $5x = 28.2$. Find the value of x.	
8 11 730 ÷ 25 = 469 r ■	469 r
9 £2.78 + £2.78 + £2.78 + £2.78 + £2.78 =	£
10 4kg × $\frac{3}{■}$ = 1500g	
11 40cm cost 50p. Find the cost per metre.	£
12 Subtract 6 from −3.	

B

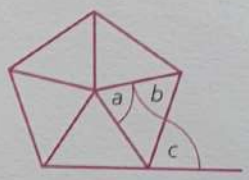
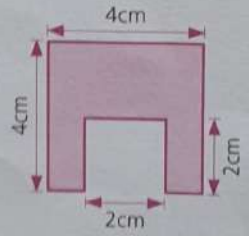
	Answer
1 a £1.32 × 4 =	a £
b £1.32 × 16 =	b £
2 What must be added to $2\frac{5}{8}$ to make $4\frac{1}{2}$?	
3 Find 8.5% of £10.	p
4 The perimeter of a rectangle is 30m. The width is 6.5m. Find its length.	m
5 Divide £162 in the ratio 5:4.	£ £
6 1000 bags of crisps cost £154.00. Find the cost of one bag of crisps to the nearest penny.	p
7 How much less than 20 is the product of 1.7 and 9?	
8 How many thousandths in $\frac{1}{4}$ of 0.02?	thousandths
9 Find the difference in millimetres between 0.7m and 369mm.	mm
10 Write 150ml of 750ml as	
a a fraction in its simplest form	a
b a percentage.	b %
11 Round these amounts to the nearest £1 and then find the approximate answer. £16.70 + £12.95 + £9.28	£
12 If 5 miles is about 8km, about how many kilometres is 17.5 miles?	km

C

	Answer
1 3.468 × 6 Write the answer	
a to three decimal places	a
b to two decimal places	b
c to one decimal place.	c
2 The contents of four boxes of sweets were 51, 46, 49 and 54. Find the mean contents.	
3  This is a plan of a field. Write its area in m².	m²
4 A crate of 240 eggs was delivered to a school kitchen. 12 of the eggs were broken. What percentage were	
a broken	a %
b not broken?	b %
5 F = {1, 2, 3, 6, ■, ■, ■, 78} F = the set of factors of 78. Find the missing factors.	
6 Find each missing mass.	

mass of onions	450g	1.75kg	$z$kg
mass of box	xg	750g	150kg
total mass	635g	$y$kg	1.1t

x g
y kg
z kg

7 A camera costs £85.50. It can be paid for in nine equal instalments. Find the cost of each payment.	£
8  This is a regular pentagon. Find in degrees the measurement of ∠ a, ∠ b, ∠ c.	∠ a ° ∠ b ° ∠ c °
9 1g = 1000mg A selection pack contains 120 chocolates. Each chocolate has a mass of 500mg.	
a Write the mass of each chocolate in grams.	a g
b Find in grams the total mass of the chocolates.	b g
10  For the shaded shape find	
a the area	a
b the perimeter.	b
11 A wall 3m high and 4m wide is to be covered in wallpaper 50cm wide. What length in metres of the paper is required?	m
12 Find the cost per kilogram of 1.5kg of ice cream costing £3.18.	£ per kg

A

Answer

1. $(268 + 232) - 350 =$ _____
2. $2\,640\,000 =$ ☐ million _____ million
3. $50p - (17p + 16p + 9p) =$ _____ p
4. $3.5m - 175cm =$ ☐ cm _____ cm
5. $\frac{\square}{21} = \frac{2}{3}$. Find the value of x. _____
6. Find the cost of 750ml at £4.80 per litre. £ _____
7. $8\overline{)\,y}$ gives 16 r 4. Find the value of y. _____
8. $4 \times 18 \times 50 =$ _____
9. $\frac{6}{8} \div 12 =$ _____
10. (12% of £5) + (8% of £5) = £ _____
11. $7\frac{1}{4}l \div$ ☐ $= 725ml$ _____
12. $\$0.14 \times 15 =$ $ _____

B

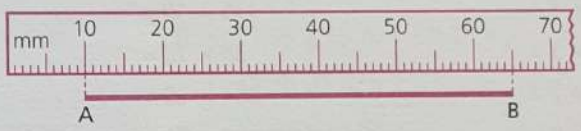
Answer

1. Find in centimetres the perimeter of an equilateral triangle with sides measuring 96mm each. _____ cm
2. Write the 24-hour clock time which is 1h 24min after 22:57. _____
3. How many times is 800g contained in 3.2kg? _____
4. Divide £85 by 6
   a to the nearest 10p a £ _____
   b to the nearest penny. b £ _____
5. The total of two amounts is £12 and their difference is £3.60. Find the two amounts. £ _____ £ _____
6. Find the difference in thousands between (1×10^5) and (9×10^4). _____
7. Write $3\frac{1}{2}\%$ as a decimal. _____
8. Multiply £2.54 by 1.5. £ _____
9. Write the year 1349 using Roman numerals. _____
10. Increase £15 by 4%. £ _____
11. Write the scale 1cm to 2km as a fraction. _____
12. The diameter of a circle is 6cm. Its circumference is 3.14 times greater. What is the perimeter of the semicircle? _____ cm

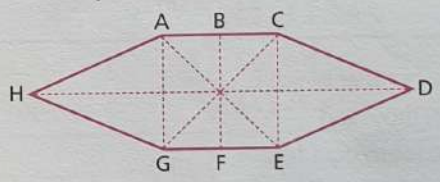
C

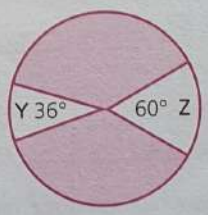
Answer

1. Find the cost per kilogram of
   a shampoo costing £1.09 for 500g a £ _____
   b conditioner costing £1.26 for 600g. b £ _____
2. A 50p coin has a mass of 13.5g. What is the mass of £10 worth of 50ps? _____ g
3. Write the length of a line 100 times the length of the line AB
   a in millimetres a _____ mm
   b in centimetres b _____ cm
   c in metres. c _____ m



4. On a plan of a house the living room measures 44mm long and 40mm wide. The scale of the plan is 1cm to 1m. Find in m^2 the area of the living room. _____ m^2
5. Which of the dotted lines are lines of symmetry? _____ _____



6. Ellie ran 800m in 1min 52s. What was her average time per 100m? _____ s
7. On a five-day holiday George walked 14.75km, 13.76km, 12.29km, 10.15km and 9.32km. Round each distance to the nearest kilometre and find the approximate mean distance walked daily. _____ km
8. 

   The circumference of the circle is 420mm. Find the length of the arcs of
   a sector Y a _____ mm
   b sector Z. b _____ mm
9. Lemonade can be made of water and lemon juice in the ratio 4:1. How many litres of water are mixed with half a 50l cask of lemon juice? _____ l
10. Find the mean daily temperature. _____ °C

Mon	Tues	Wed	Thurs	Fri
5°C	3°C	0°C	−1°C	−2°C

11. The point (3, 5) is translated two squares to the left and four squares down. The new point is then reflected in the y-axis. What are the coordinates of the reflected point? (_____ , _____)
12. These are the results of three tests. Write each as a percentage.
    a $\frac{18}{25}$ b $\frac{30}{40}$ c $\frac{10}{30}$
    a _____ %
    b _____ %
    c _____ %

CHECK-UP TEST | Measurement

A Find the total of each row of coins.

50p	20p	10p	5p	2p	1p	Total
	2	3	4	6		
2	5	9			13	
	7		5	8		
		17	8		12	
1	3	6		10		
5	4	7	12			
11					23	

B Find **a** the total cost of the items bought and **b** the change

money given	cost of items bought	total cost	change
50p	9p, 8p, 18p	p	p
four 10ps	5 at 7p each	p	p
£1	23p, 18p, 40p	p	p
£1 and 50p	3 at 38p each	£	p
£2	10 at 18p each	£	p
£5 note	£2.75, £1.28	£	p

C

£0.39 = ☐ 5ps + seven 2ps
£0.85 = 50p + ☐ 5ps
£1.70 = two 10ps + ☐ 50ps
£2.80 = eight 5ps + ☐ 20ps
£4.25 = seven 50ps + ☐ 5ps

How many items each costing
2p for 98p
3p for £1.74
5p for £2.05
50p for £18.50
20p for £25.20
5 for 6p for £1.62
7 for 10p for £3.30?

10 items cost £1.20
1 costs ____ p 7 cost ____ p

100 items cost £2.30
10 cost ____ p 30 cost ____ p

20 items cost £3.60
5 cost ____ p 1 costs ____ p

8 items cost £1.44
3 cost ____ p 7 cost £____

5 items cost 85p
1 costs ____ p 9 cost £____
40 cost £____ 100 cost £____

39p + 57p + 41p = £____
£1.06 + £3.70 + £0.28 = £____
£1.36 – 87p = ____ p
£4.00 – £1.68 = £____
€6.03 – €1.89 = €____
19p × 7 = £____
£2.08 × 9 = £____
£5.78 × 6 = £____
£3.04 ÷ 8 = ____ p
£27 ÷ 4 = £____
$43.45 ÷ 5 = $____

D

55cm = ____ m
309mm = ____ cm
5040mm = ____ m
1095cm = ____ m
300m = ____ km
2805m = ____ km
5000m = ____ km
90g = ____ kg
875g = ____ kg
3500g = ____ kg
120ml = ____ l
650ml = ____ cm³

20.7cm = ____ mm
3.45m = ____ cm
10.6m = ____ mm
0.085km = ____ m
7.5km = ____ m
4.285km = ____ m
0.065kg = ____ g
8.11kg = ____ g
5.4l = ____ ml
0.75l = ____ ml
4.5l = ____ cm³
2.008l = ____ cm³

Find the cost of:
100g at 70p per kg ____ p
400g at 45p per kg ____ p
250g at £1.10 per ½kg ____ p
3.5kg at 18p per ½kg £____
450g at 70p per ½kg ____ p
75cm at £3.00 per m £____
10cm at £2.90 per m ____ p
20cm at £4.20 per m ____ p
1.25l at 36p per ½l ____ p
900ml at 60p per l ____ p
6.5m² at £4.50 per m². £____

E Fill in the missing times.

12-hour clock time	24-hour clock time
10.35 p.m.	
	04:10
12.05 a.m.	
	23:55

How many hours and minutes between
8.45 a.m. and 11.20 a.m. ____ h ____ min
10.25 a.m. and 1.05 p.m. ____ h ____ min
9.38 p.m. and 2.10 a.m. ____ h ____ min
11:50 and 13:15 ____ h ____ min
06:19 and 10:20? ____ h ____ min

How many days inclusive
from 28 March to 7 April ____
from 13 May to 4 June ____
from 15 July to 3 August ____
from 24 September to 8 November ____
from 19 October to 10 December? ____

F Approximate to the nearest:

£1 a £12.09 £____
b £3.52 £____
10p a £2.37 £____
b £10.06 £____

Write the answer to the nearest penny.

a ⅓ of £7.00 £____
b £3.10 ÷ 7 ____ p
c ⅛ of £17.25 £____
d ¼ of £3.95 ____ p

Approximate to the nearest:

centimetre	0.837m	____ cm
metre	305.6cm	____ m
kilogram	9kg 550g	____ kg
litre	6.325l	____ l
½ kilogram	7.750kg	____ kg
hour	2h 29min	____ h
½ hour	4h 21min.	____ h

CHECK-UP TEST | Number and geometry

A Change to decimal fractions. When necessary work to the nearest second place.

a $\frac{4}{5}$ _____ b $\frac{1}{6}$ _____ c $\frac{2}{3}$ _____ d $\frac{7}{8}$ _____ e $\frac{5}{7}$ _____

B

$\frac{1}{3} + \frac{1}{2} =$ _____
$\frac{1}{4} + \frac{1}{6} =$ _____
$\frac{5}{8} + \frac{3}{4} =$ _____
$\frac{3}{10} + 1\frac{1}{2} =$ _____

$\frac{1}{2} - \frac{1}{6} =$ _____
$\frac{3}{4} - \frac{2}{3} =$ _____
$3 - 1\frac{7}{12} =$ _____
$2\frac{1}{4} - 1\frac{7}{8} =$ _____

$\frac{2}{3} \times 12 =$ _____
$10 \times 1\frac{2}{5} =$ _____
$1\frac{7}{10} \times 20 =$ _____
$40 \times \frac{3}{8} =$ _____

Express as mixed numbers.
$\frac{137}{10}$ _____
$93 \div 8$ _____
$124 \div 9$ _____

C Write each fraction in its simplest form as a percentage.

a $\frac{12}{20}$ _____ b $\frac{28}{40}$ _____ c $\frac{45}{100}$ _____ d $\frac{24}{32}$ _____ e $\frac{30}{50}$ _____

Write each of these scales as a fraction.

a 1mm to 20cm _____ b 1cm to 5m _____ c 1cm to 1km _____

D Fill in the table. The first example is done for you.

	fraction (simplest form)	percentage (%)	ratio
40p of 50p	$\frac{4}{5}$	80%	4:5
300g of 0.5kg		%	
700ml of 1l		%	
5p of £1		%	

	fraction (simplest form)	percentage (%)	ratio
50cm of 2m		%	
750g of 1.5kg		%	
250 of 400		%	
35p of £5		%	

E

8 cost £10. What fraction of £10 do
3 cost _____ 7 cost? _____
5 cost £7. What fraction of £7 do
2 cost _____ 8 cost? _____
10 cost £3.50. What fraction of £3.50 do
9 cost _____ 15 cost? _____

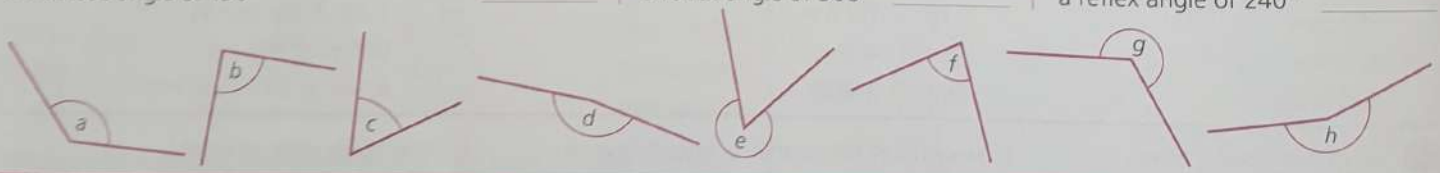
Share each quantity in the given ratio.
£30, ratio 3:2 £ _____ £ _____
1.75kg, ratio 4:1 _____ kg _____ g
2m, ratio 5:3 _____ cm _____ cm

F

Find the value of
$\frac{3}{10}$ of £1.60 _____ p
0.75 of 600 _____
60% of $\frac{1}{2}$kg _____ g
0.9 of 2l _____ l
50% of 3m 70cm _____ m _____ cm
$\frac{3}{100}$ of 1kg _____ g
0.95 of 10000 _____
17% of £3.00 _____ p
$\frac{5}{9}$ of 1.8kg. _____ kg

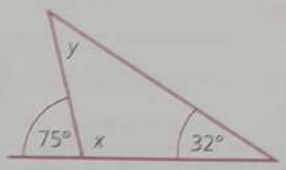
Find the whole when
0.25 is £3.50 £ _____
$\frac{3}{4}$ is 57cm _____ cm
10% is 850g _____ kg
0.6 is 42p _____ p
$\frac{5}{8}$ is 2.5kg _____ kg
30% is 1.8l _____ l
0.375 is 300 _____
$\frac{7}{10}$ is 91p £ _____
5% is 200g. _____ kg

G Estimate which of the angles marked $a - h$ is:
an obtuse angle of 130° _____
a right angle _____
a reflex angle of 300° _____
an acute angle of 80° _____
a reflex angle of 240° _____

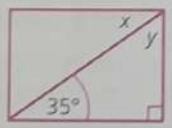


H Find the angle marked x and/or y in each shape.

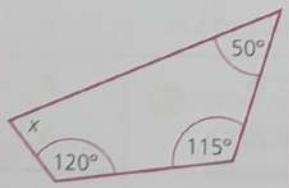
$\angle x$ _____ °
$\angle y$ _____ °



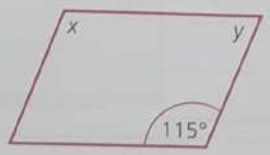
$\angle x$ _____ °
$\angle y$ _____ °



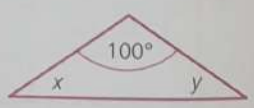
$\angle x$ _____ °



$\angle x$ _____ °
$\angle y$ _____ °



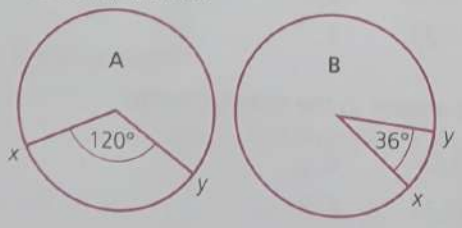
$\angle x$ _____ °
$\angle y$ _____ °



Fill in the table for regular polygons.

name of regular polygon	number of sides	angle at centre
	6	°
octagon		°
	5	°

What fraction of the circumference is the arc xy in circle A, circle B?



A _____
B _____

CHECK-UP TEST | Number and geometry

A Change to decimal fractions. When necessary work to the nearest second place.

a $\frac{4}{5}$ _____ b $\frac{1}{6}$ _____ c $\frac{2}{3}$ _____ d $\frac{7}{8}$ _____ e $\frac{4}{9}$ _____

B

$\frac{1}{3} + \frac{1}{2} =$ _____
$\frac{1}{4} + \frac{1}{6} =$ _____
$\frac{5}{8} + \frac{3}{4} =$ _____
$\frac{3}{10} + 1\frac{1}{2} =$ _____

$\frac{1}{2} - \frac{1}{6} =$ _____
$\frac{3}{4} - \frac{2}{3} =$ _____
$3 - 1\frac{7}{12} =$ _____
$2\frac{1}{4} - 1\frac{7}{8} =$ _____

$\frac{2}{3} \times 12 =$ _____
$10 \times 1\frac{2}{5} =$ _____
$1\frac{7}{10} \times 20 =$ _____
$40 \times \frac{3}{8} =$ _____

Express as mixed numbers.
$\frac{137}{10}$ _____
$93 \div 8$ _____
$124 \div 9$ _____

C Write each fraction in its simplest form as a percentage.

a $\frac{12}{20}$ _____ b $\frac{28}{40}$ _____ c $\frac{45}{100}$ _____ d $\frac{24}{32}$ _____ e $\frac{30}{50}$ _____

Write each of these scales as a fraction.

a 1mm to 20cm _____ b 1cm to 5m _____ c 1cm to 1km _____

D Fill in the table. The first example is done for you.

	fraction (simplest form)	percentage (%)	ratio
40p of 50p	$\frac{4}{5}$	80%	4:5
300g of 0.5kg		%	
700ml of 1l		%	
5p of £1		%	

	fraction (simplest form)	percentage (%)	ratio
50cm of 2m		%	
750g of 1.5kg		%	
250 of 400		%	
35p of £5		%	

E

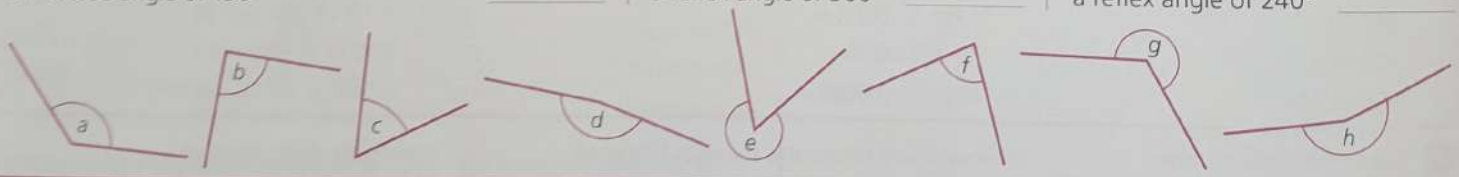
8 cost £10. What fraction of £10 do
3 cost _____ 7 cost? _____
5 cost £7. What fraction of £7 do
2 cost _____ 8 cost? _____
10 cost £3.50. What fraction of £3.50 do
9 cost _____ 15 cost? _____
Share each quantity in the given ratio.
£30, ratio 3:2 £ _____ £ _____
1.75kg, ratio 4:1 _____ kg _____ g
2m, ratio 5:3 _____ cm _____ cm

F

Find the value of
$\frac{3}{10}$ of £1.60 _____ p
0.75 of 600 _____
60% of $\frac{1}{2}$kg _____ g
0.9 of 2l _____ l
50% of 3m 70cm _____ m _____ cm
$\frac{3}{100}$ of 1kg _____ g
0.95 of 10000 _____
17% of £3.00 _____ p
$\frac{5}{9}$ of 1.8kg. _____ kg

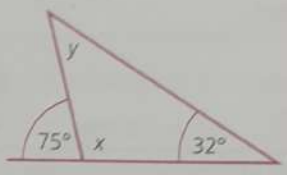
Find the whole when
0.25 is £3.50 £ _____
$\frac{3}{4}$ is 57cm _____ cm
10% is 850g _____ kg
0.6 is 42p _____ p
$\frac{5}{8}$ is 2.5kg _____ kg
30% is 1.8l _____ l
0.375 is 300 _____
$\frac{7}{10}$ is 91p £ _____
5% is 200g. _____ kg

G Estimate which of the angles marked *a* – *h* is:
an obtuse angle of 130° _____
a right angle _____
a reflex angle of 300° _____
an acute angle of 80° _____
a reflex angle of 240° _____

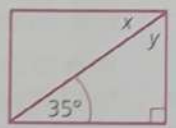


H Find the angle marked *x* and/or *y* in each shape.

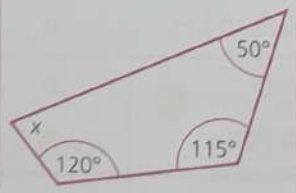
∠x _____ °
∠y _____ °



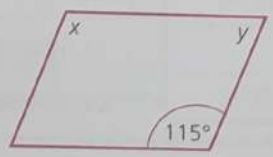
∠x _____ °
∠y _____ °



∠x _____ °



∠x _____ °
∠y _____ °

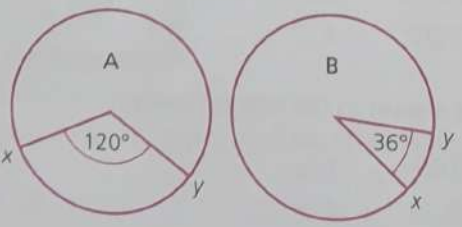


∠x _____ °
∠y _____ °

Fill in the table for regular polygons.

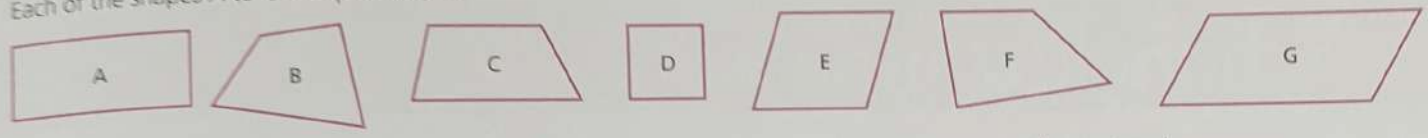
name of regular polygon	number of sides	angle at centre
	6	°
octagon		°
	5	°

What fraction of the circumference is the arc *xy* in circle A, circle B?



A _____
B _____

A Each of the shapes A to G is a quadrilateral.



Give the **letter** of the shape which is

a a rhombus _____ b a rectangle _____

c a trapezium _____ d a square _____ e a parallelogram. _____

Write the **name** of the shape (or shapes) which has:

four equal sides _____

four right angles _____

opposite sides equal and parallel _____

one pair only of parallel sides _____

diagonals which are equal _____

diagonals which bisect each other at right angles _____

Write the **letter** of the shape or shapes which have:

a no axis of symmetry _____

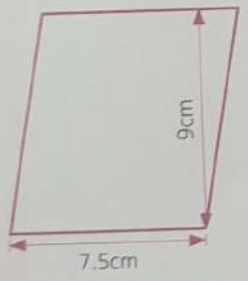
b two axes of symmetry _____

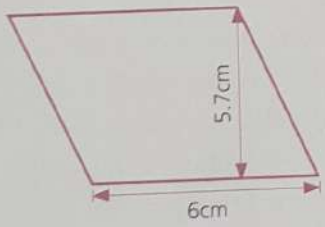
c four axes of symmetry _____

B Fill in the missing measurements. In each case give the unit of measurement.

Rectangles $A = lb$ $b = \frac{A}{l}$ $l = \frac{A}{b}$			
length	breadth	perimeter	area
7cm	5.5cm		
16cm	6cm		
	8cm	36cm	
9cm			$31.5cm^2$
	20m		$500m^2$

Triangles $A = \frac{bh}{2}$ $b = 2\frac{A}{h}$ $h = 2\frac{A}{b}$		
base	height	area
35mm	12mm	
27cm	18cm	
	6cm	$27cm^2$
	3cm	$16.5cm^2$
1.6m		$7.2m^2$



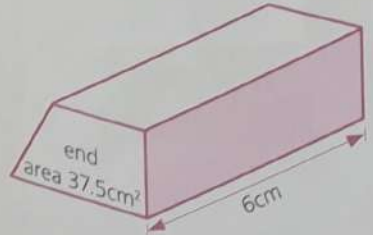


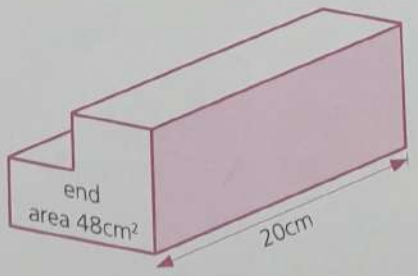
Rhombuses and parallelograms $A = bh$ $b = \frac{A}{h}$ $h = \frac{A}{b}$					
base	7.5cm	6cm		1.5m	40cm
height	9.0cm	5.7cm	7cm		15mm
area			$112cm^2$	$4.5m^2$	

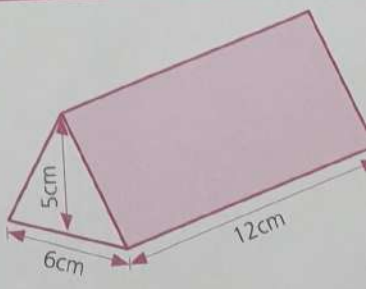
Circles $C = \pi d$ or $2\pi r$: $\pi = 3.14$			
radius (r)		3cm	10cm
diameter (d)	2cm		
circumference (c)			

Cubes and cuboids $V = lbh$ $l = \frac{V}{bh}$ $b = \frac{V}{hl}$			
length	breadth	height	volume
8cm	5cm	9cm	
20cm	20cm	20cm	
	3.5m	2m	$56m^3$
6.4cm		5cm	$320cm^3$
10cm	9.3cm		$186cm^3$

Find the volume of each of these prisms.







_____ _____ _____

Schofield & Sim

A

	Answer
1 2300 + 970 + 1700 =	4970
2 $\frac{7}{8} \div 7$ =	$\frac{1}{8}$
3 70% of 360° =	252°
4 (15 × 8) ÷ 6 =	20
5 379m + 221m = ☐ km	0.6km
6 $\frac{£2.50 \times 12}{6}$ = £☐	£5.00
7 a $\frac{1}{2}$l + xml = 615ml. Find x.	a 115ml
b $\frac{1}{2}$l − 368ml = yml. Find y.	b 132ml
8 a 0.3 × 0.2 =	a 0.06
b 0.06 ÷ 0.2 =	b 0.3
9 $\frac{1}{4} + \frac{5}{16}$ =	$\frac{9}{16}$
10 2.475m ÷ 9 = ☐ mm	275mm
11 Subtract 17 from 9.	−8
12 24.8 × 1.6 = ☐	39.68
248 × 16 = 3968	

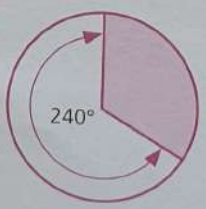
B

	Answer
1 How many quarters are there in 36?	144
2 Write as a fraction in its simplest form.	
a $\frac{4}{1000}$ b $\frac{45}{1000}$ c $\frac{28}{1000}$	a $\frac{1}{250}$ b $\frac{9}{200}$ c $\frac{7}{250}$
3 1kg costs £4.00. Find the cost of 700g.	£2.80
4 Find the product of 20 and 0.005.	0.1
5 How many centimetres remain when 268cm are taken from 3.4m?	72cm
6 Write to the nearest second decimal place.	
a 53.176	a 53.18
b 24.694	b 24.69
7 Find the mean of 1.1, 2.3 and 0.8.	1.4
8 Share 3kg in the ratio 1:4.	0.6kg 2.4kg
9 Which year is MDCXXXII?	1632
10 Find the area in cm² of a square of side 11cm.	121cm²
11 Which two numbers have a sum of 20 and a product of 36?	2 18
12 Deduct (£1.15 × 3) from (£18 ÷ 5).	15p

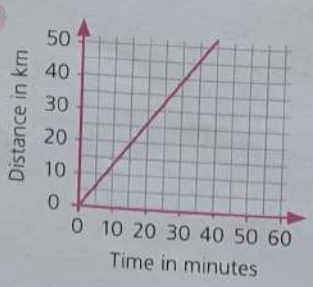
C

	Answer
1 The approximate population of a city is 1.2 million. The actual population is 1 207 806. Find the difference.	7806
2 Two parcels together have a mass of 18.5kg. One of them is 4kg heavier than the other. Find the mass of each parcel.	7.25kg 11.25kg
3 Which of these shapes will have a circular face when cut horizontally, and a rectangular face when cut vertically?	cylinder

4 In a class of 30 children 12 were absent. Write the number absent as	
a a fraction in its simplest form	a $\frac{2}{5}$
b a ratio.	b 2:5
5 A bagel costs 35p. How many can be bought for £7.00?	20
6 VWYZ is a rhombus. WXY is an isosceles triangle. Find	
a ∠ WYZ	a 112°
b ∠ VWY	b 68°
c ∠ ZVW.	c 112°
7 Tom has 95p and Sophie has 73p. How much must Tom give to Sophie so that each has the same amount?	11p
8 If 1 July falls on a Thursday how many Saturdays will there be in that month?	5
9 One child in every four in a school of 200 walks to school.	
a What percentage do not walk to school?	a 75%
b How many walk to school?	b 50
10 Write the coordinates of the point (3, 5) when reflected in the x-axis.	(3, −5)



11 The area of the circle is 321cm². Find the area of the shaded sector. 107cm²



12 The graph shows the speed of a car. Use the graph to find the time taken by the car to travel 40km. 30min

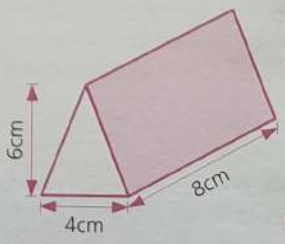
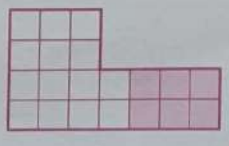
A

	Answer
1 £1.20 × $3\frac{1}{2}$ =	£4.20
2 $\frac{2.64 + 3.36}{2}$ =	3
3 2.25ml − (250ml × 6) = ☐ ml	750ml
4 $\frac{20}{24} \div 25$ =	$\frac{1}{30}$
5 1200km − (320km + 280km + 335km) =	265km
6 a $\frac{1}{8}$ = ☐ %	a 12.5%
b $\frac{3}{8}$ = ☐ %	b 37.5%
7 9.8 ÷ 4 =	2.45
8 £5.00 − £☐ = £2.82	£2.18
9 £6 × $\frac{2}{5}$ =	£2.40
10 9x = 33 + 48. Find the value of x.	9
11 Find the cost of 30cm at £1.80 per metre.	54p
12 $\frac{1}{7}$ of 4kg 60g = ☐ g	580g

B

	Answer
1 Add $\frac{3}{4}$ of 28 to $\frac{7}{8}$ of 56.	70
2 $(4 \times 10^3) + (2 \times 10^2)$ =	4200
3 Increase £3.00 by 7%.	£3.21
4 Write $\frac{3}{8}$ as a decimal fraction.	0.375
5 Find the total mass in kilograms of these amounts of water. 2.7l 95ml 3.4l	6.195kg
6 One pear costs 17p. Find the cost of a 10 b 1000.	a £1.70 b £170
7 A rhombus has an area of 100cm². Its base is 5cm. Find its height in millimetres.	200mm
8 Approximate 4635000 to a the nearest 1000000 b the nearest 100000.	a 5000000 b 4600000
9 Write the year 1916 using Roman numerals.	MCMXVI
10 Find the difference in hundredths between 100 × 0.016 and 100 × 0.017.	10 hundredths
11 Express 43 ÷ 5 as a a mixed number b a decimal.	a $8\frac{3}{5}$ b 8.6
12 Multiply £1.50 by 52.	£78.00

C

	Answer
1 A cask holds 20.75l of water. The mass of the cask when empty is 850g. Find the mass of the cask when it is full.	21.6kg
2  A is the centre of the circle. a Name the triangle ABC by its sides. b Calculate the angle at B.	a isosceles b 35°
3 Six pairs of socks cost £8.37. Find to the nearest penny the cost of one pair of socks.	£1.40
4 There are 4.545l of shampoo in a plastic container. The shampoo lasts for nine weeks. How many millilitres are used on average per week?	505ml
5  There was 87p change from £3 after buying the multipack. Find the cost of each bottle.	71p
6 Find in litres the volume of a one multipack b eight multipacks.	a 2.46l b 19.68l
7 A map is drawn to a scale of 1cm to 1km. How many metres are represented on a map by a line 14mm long?	1400m
8  Find a the area of the triangular end of the prism b the volume of the prism.	a 12cm² b 96cm³
9 A car averaged 8km to a litre of petrol on a four-hour journey of 312km. a How many litres were used on the journey? b What was the average speed?	a 39l b 78km/h
10 The price of a pair of shoes costing £25 increased by £1.25. Write the increase as a percentage.	5%
11  Write the proportion of shaded squares a as a fraction in its simplest form b as a decimal.	a $\frac{3}{10}$ b 0.3
12 Matthew arrived at a hotel on 29 October and left on 3 November. The charge for the room was £10.50 per night. What was the total cost of the room?	£52.50

SECTION 3 | Test 11

Schofield & Sims

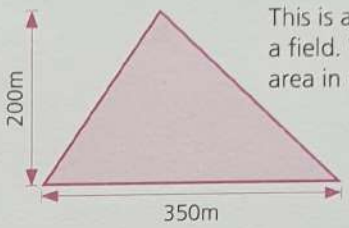
A

		Answer
1	2.999 + 0.1 =	3.099
2	$\frac{40}{45} \div 8 =$	$\frac{1}{9}$
3	6.25% of £4.00 = ☐ p	25p
4	£3.24 = ☐ × 2p	162
5	86.6 × 200 =	17320
6	5.2l − 480ml = ☐ l	4.72l
7	$5x = 28.2$. Find the value of x.	5.64
8	11730 ÷ 25 = 469 r ☐	469 r 5
9	£2.78 + £2.78 + £2.78 + £2.78 + £2.78 + £2.78 =	£13.90
10	4kg × $\frac{3}{☐}$ = 1500g	8
11	40cm cost 50p. Find the cost per metre.	£1.25
12	Subtract 6 from −3.	−9

B

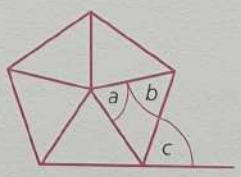
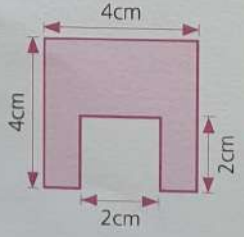
		Answer
1	a £1.32 × 4 =	a £5.28
	b £1.32 × 16 =	b £21.12
2	What must be added to $2\frac{5}{8}$ to make $4\frac{1}{2}$?	$1\frac{7}{8}$
3	Find 8.5% of £10.	85p
4	The perimeter of a rectangle is 30m. The width is 6.5m. Find its length.	8.5m
5	Divide £162 in the ratio 5:4.	£90 £72
6	1000 bags of crisps cost £154.00. Find the cost of one bag of crisps to the nearest penny.	15p
7	How much less than 20 is the product of 1.7 and 9?	4.7
8	How many thousandths in $\frac{1}{4}$ of 0.02?	5 thousandths
9	Find the difference in millimetres between 0.7m and 369mm.	331mm
10	Write 150ml of 750ml as	
	a a fraction in its simplest form	a $\frac{1}{5}$
	b a percentage.	b 20%
11	Round these amounts to the nearest £1 and then find the approximate answer. £16.70 + £12.95 + £9.28	£39
12	If 5 miles is about 8km, about how many kilometres is 17.5 miles?	28km

C

		Answer
1	3.468 × 6 Write the answer	
	a to three decimal places	a 20.808
	b to two decimal places	b 20.81
	c to one decimal place.	c 20.8
2	The contents of four boxes of sweets were 51, 46, 49 and 54. Find the mean contents.	50
3	 This is a plan of a field. Write its area in m².	35000m²
4	A crate of 240 eggs was delivered to a school kitchen. 12 of the eggs were broken. What percentage were	
	a broken	a 5%
	b not broken?	b 95%
5	F = {1, 2, 3, 6, ☐, ☐, ☐, 78} F = the set of factors of 78. Find the missing factors.	13 26 39
6	Find each missing mass.	

mass of onions	450g	1.75kg	$z$kg
mass of box	xg	750g	150kg
total mass	635g	$y$kg	1.1t

x 185g
y 2.5kg
z 950kg

7	A camera costs £85.50. It can be paid for in nine equal instalments. Find the cost of each payment.	£9.50
8	 This is a regular pentagon. Find in degrees the measurement of ∠ a, ∠ b, ∠ c.	∠ a 72° ∠ b 54° ∠ c 72°
9	1g = 1000mg A selection pack contains 120 chocolates. Each chocolate has a mass of 500mg.	
	a Write the mass of each chocolate in grams.	a 0.5g or $\frac{1}{2}$g
	b Find in grams the total mass of the chocolates.	b 60g
10	 For the shaded shape find	
	a the area	a 12cm²
	b the perimeter.	b 20cm
11	A wall 3m high and 4m wide is to be covered in wallpaper 50cm wide. What length in metres of the paper is required?	24m
12	Find the cost per kilogram of 1.5kg of ice cream costing £3.18.	£2.12 per kg

SECTION 3 | Test 12

A

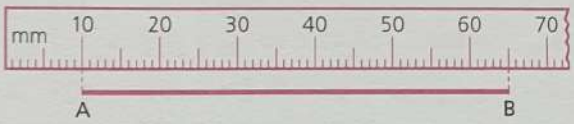
		Answer
1	(268 + 232) – 350 =	150
2	2640000 = ☐ million	2.64 million
3	50p – (17p + 16p + 9p) =	8p
4	3.5m – 175cm = ☐ cm	175cm
5	$\frac{\square}{21} = \frac{2}{3}$. Find the value of x.	14
6	Find the cost of 750ml at £4.80 per litre.	£3.60
7	$8\overline{)y}$ = 16 r 4. Find the value of y.	132
8	4 × 18 × 50 =	3600
9	$\frac{6}{8} \div 12 =$	$\frac{1}{16}$
10	(12% of £5) + (8% of £5) =	£1.00
11	$7\frac{1}{4}$l ÷ ☐ = 725ml	10
12	$0.14 × 15 =	$2.10

B

		Answer
1	Find in centimetres the perimeter of an equilateral triangle with sides measuring 96mm each.	28.8cm
2	Write the 24-hour clock time which is 1h 24min after 22:57.	00:21
3	How many times is 800g contained in 3.2kg?	4
4	Divide £85 by 6	
	a to the nearest 10p	a £14.20
	b to the nearest penny.	b £14.17
5	The total of two amounts is £12 and their difference is £3.60. Find the two amounts.	£7.80 £4.20
6	Find the difference in thousands between (1×10^5) and (9×10^4).	10000
7	Write $3\frac{1}{2}$% as a decimal.	0.035
8	Multiply £2.54 by 1.5.	£3.81
9	Write the year 1349 using Roman numerals.	MCCCXLIX
10	Increase £15 by 4%.	£15.60
11	Write the scale 1cm to 2km as a fraction.	$\frac{1}{200000}$
12	The diameter of a circle is 6cm. Its circumference is 3.14 times greater. What is the perimeter of the semicircle?	15.42cm

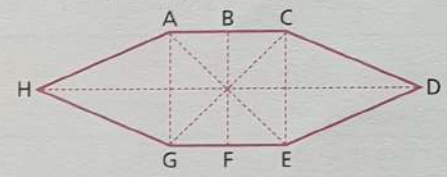
C

		Answer
1	Find the cost per kilogram of	
	a shampoo costing £1.09 for 500g	a £2.18
	b conditioner costing £1.26 for 600g.	b £2.10
2	A 50p coin has a mass of 13.5g. What is the mass of £10 worth of 50ps?	270g
3	Write the length of a line 100 times the length of the line AB	
	a in millimetres	a 5500mm
	b in centimetres	b 550cm
	c in metres.	c 5.5m



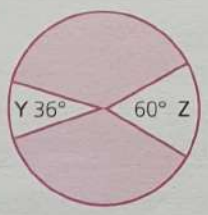
4 On a plan of a house the living room measures 44mm long and 40mm wide. The scale of the plan is 1cm to 1m. Find in m² the area of the living room. 17.6m²

5 Which of the dotted lines are lines of symmetry? BF HD



6 Ellie ran 800m in 1min 52s. What was her average time per 100m? 14s

7 On a five-day holiday George walked 14.75km, 13.76km, 12.29km, 10.15km and 9.32km. Round each distance to the nearest kilometre and find the approximate mean distance walked daily. 12km

8 

The circumference of the circle is 420mm. Find the length of the arcs of

a sector Y a 42mm

b sector Z. b 70mm

9 Lemonade can be made of water and lemon juice in the ratio 4:1. How many litres of water are mixed with half a 50l cask of lemon juice? 100l

10 Find the mean daily temperature. 1°C

Mon	Tues	Wed	Thurs	Fri
5°C	3°C	0°C	–1°C	–2°C

11 The point (3, 5) is translated two squares to the left and four squares down. The new point is then reflected in the y-axis. What are the coordinates of the reflected point? (–1, 1)

12 These are the results of three tests. Write each as a percentage.

a $\frac{18}{25}$ b $\frac{30}{40}$ c $\frac{10}{30}$

a 72%

b 75%

c $33\frac{1}{3}$%

CHECK-UP TEST | Number

A

12 − 7 =	5	53 ÷ 7 =	7 r 4
9 + 4 =	13	(6 × 8) + 5 =	53
3 × 6 =	18	70 ÷ 8 =	8 r 6
63 ÷ 9 =	7	(4 × 9) + 7 =	43
6 + 9 =	15	52 ÷ 6 =	8 r 4
7 × 8 =	56	(7 × 0) + 3 =	3
11 − 7 =	4	4 ÷ 9 =	0 r 4
24 ÷ 3 =	8	(8 × 1) + 6 =	14
5 + 8 =	13	61 ÷ 7 =	8 r 5
0 ÷ 7 =	0	(9 × 4) + 5 =	41
8 × 6 =	48	77 × 10 =	770
64 ÷ 8 =	8	135 ÷ 10 =	13 r 5
9 × 3 =	27	35 × 20 =	700
13 − 7 =	6	204 ÷ 20 =	10 r 4
7 + 8 =	15	96 × 30 =	2880
15 − 9 =	6	156 ÷ 40 =	3 r 36
0 × 8 =	0	108 × 60 =	6480
4 + 6 =	10	302 ÷ 60 =	5 r 2
40 ÷ 8 =	5	88 × 70 =	6160
16 − 7 =	9	463 ÷ 90 =	5 r 13

B Write these numbers in digits.

forty thousand and nine	40009
eighty-one thousand two hundred and five	81205
two hundred and ten thousand four hundred	210400
five hundred and six thousand and seventy	506070
700000 + 1000 + 90 + 5	701095
(4 × 10000) + (8 × 100) + 9	40809
1 million	1000000
$1\frac{3}{4}$ million	1750000
2.6 million	2600000
$(6 \times 10^3) + (3 \times 10^2) + (0 \times 10)$	6300
$(9 \times 10^4) + (7 \times 10^3) + (1 \times 10^2) + (3 \times 10)$	97130

Write the answers to these as decimals.

206 tenths	20.6
1509 thousandths	1.509
eighteen hundredths	0.18
$17 + \frac{5}{10} + \frac{3}{1000}$	17.503
$10 + \frac{6}{100} + \frac{7}{1000}$	10.067
$\frac{27}{100} + \frac{8}{1000}$	0.278
$60 + \frac{57}{1000}$	60.057

C Write in digits the number which is

forty less than ten thousand	9960
zero point six two more than ten	10.62
five hundred less than fifty-five thousand	54500
two point seven less than two hundred.	197.3

Write in words the value of the digit underlined.

37908	seven thousand
1604326	six hundred thousand
9.084	eight hundredths
20.502	two thousandths

7.9 =	79 tenths	20.6 =	206 tenths
0.75 =	75 hundredths	3.09 =	309 hundredths
0.018 =	18 thousandths	10.06 =	10060 thousandths
5.9 =	5900 thousandths	0.003 =	3 thousandths

Write these numbers, omitting the zeros which do not alter the value of the number.

17.09	17.09	8.070	8.07
020.60	20.6	30.020	30.02
002730	2730	106.00	106

D

3.46 + 5.04 =	8.5	30.08 × 10 =	300.8
5.16 + 3.8 =	8.96	2.017 × 100 =	201.7
1.99 + 2.01 =	4.00	0.063 × 1000 =	63
0.76 + 0.493 =	1.253	3 × 7.8 =	23.4
2.83 + 7.178 =	10.008	0.09 × 6 =	0.54
3.92 − 1.9 =	2.02	6.075 × 8 =	48.6
6.1 − 0.7 =	5.4	10.3 ÷ 10 =	1.03
10.0 − 9.348 =	0.652	3.7 ÷ 100 =	0.037
7.2 − 0.09 =	7.11	46 ÷ 1000 =	0.046
8.63 − 3.58 =	5.05	18.36 ÷ 6 =	3.06
5.825 − 0.06 =	5.765	2.43 ÷ 9 =	0.27
Find the value of x.		14.091 ÷ 7 =	2.013
$x + 19 = 54$	35	Find the value of x.	
$3.2 + x = 10$	6.8	$10 \times x = 3.65$	0.365
$52 - x = 18$	34	$x \times x = 36$	6
$x - 4.05 = 3.6$	7.65	$7x = 108.5$	15.5
$2.3 + x = 20$	17.7	$\frac{\square}{5} = 12.8$	64
$x = 17.2 - 5.5$	11.7	$\frac{72}{\square} = 9$	8

E Approximate to the nearest:

hundred thousand	1.37 million		1.4 million
thousand	79464		79000
hundred	23086		23100
whole number	a $16\frac{1}{3}$	16	b 29.52 30
first decimal place	10.38		10.4
	5.94		5.9
second decimal place.	0.025		0.03
	13.004		13.00

F Work out these divisions

a to 2 decimal places then

b approximate the answer to the nearest first decimal place.

39 ÷ 8 =	a 4.88	b 4.9
5.5 ÷ 3 =	a 1.83	b 1.8
14.6 ÷ 7 =	a 2.09	b 2.1

Work out these divisions

a to 3 decimal places then

b write the answer correct to 2 decimal places.

58 ÷ 6 =	a 9.667	b 9.67
34.26 ÷ 9 =	a 3.807	b 3.81

CHECK-UP TEST | Measurement

A Find the total of each row of coins.

50p	20p	10p	5p	2p	1p	Total
	2	3	4	6		£1.02
2	5	9			13	£3.03
	7		5	8		£1.81
		17	8		12	£2.22
1	3	6		10		£1.90
5	4	7	12			£4.60
11					23	£5.73

B Find **a** the total cost of the items bought and **b** the change

money given	cost of items bought	total cost	change
50p	9p, 8p, 18p	35p	15p
four 10ps	5 at 7p each	35p	5p
£1	23p, 18p, 40p	81p	19p
£1 and 50p	3 at 38p each	£1.14	36p
£2	10 at 18p each	£1.80	20p
£5 note	£2.75, £1.28	£4.03	97p

C

£0.39 = ■ 5ps + seven 2ps — 5
£0.85 = 50p + ■ 5ps — 7
£1.70 = two 10ps + ■ 50ps — 3
£2.80 = eight 5ps + ■ 20ps — 12
£4.25 = seven 50ps + ■ 5ps — 15

How many items each costing
2p for 98p — 49
3p for £1.74 — 58
5p for £2.05 — 41
50p for £18.50 — 37
20p for £25.20 — 126
5 for 6p for £1.62 — 135
7 for 10p for £3.30? — 231

10 items cost £1.20
1 costs 12p — 7 cost 84p

100 items cost £2.30
10 cost 23p — 30 cost 69p

20 items cost £3.60
5 cost 90p — 1 costs 18p

8 items cost £1.44
3 cost 54p — 7 cost £1.26

5 items cost 85p
1 costs 17p — 9 cost £1.53
40 cost £6.80 — 100 cost £17.00

39p + 57p + 41p = £1.37
£1.06 + £3.70 + £0.28 = £5.04
£1.36 − 87p = 49p
£4.00 − £1.68 = £2.32
€6.03 − €1.89 = €4.14
19p × 7 = £1.33
£2.08 × 9 = £18.72
£5.78 × 6 = £34.68
£3.04 ÷ 8 = 38p
£27 ÷ 4 = £6.75
$43.45 ÷ 5 = $8.69

D

55cm = 0.55m
309mm = 30.9cm
5040mm = 5.04m
1095cm = 10.95m
300m = 0.3km
2805m = 2.805km
5000m = 5km
90g = 0.09kg
875g = 0.875kg
3500g = 3.5kg
120ml = 0.12l
650ml = 650cm³

20.7cm = 207mm
3.45m = 345cm
10.6m = 10600mm
0.085km = 85m
7.5km = 7500m
4.285km = 4285m
0.065kg = 65g
8.11kg = 8110g
5.4l = 5400ml
0.75l = 750ml
4.5l = 4500cm³
2.008l = 2008cm³

Find the cost of:
100g at 70p per kg — 7p
400g at 45p per kg — 18p
250g at £1.10 per ½kg — 55p
3.5kg at 18p per ½kg — £1.26
450g at 70p per ½kg — 63p
75cm at £3.00 per m — £2.25
10cm at £2.90 per m — 29p
20cm at £4.20 per m — 84p
1.25l at 36p per ½l — 90p
900ml at 60p per l — 54p
6.5m² at £4.50 per m². — £29.25

E Fill in the missing times.

12-hour clock time	24-hour clock time
10.35 p.m.	22:35
4.10 a.m.	04:10
12.05 a.m.	00:05
11.55 p.m.	23:55

How many hours and minutes between
8.45 a.m. and 11.20 a.m. — 2h 35min
10.25 a.m. and 1.05 p.m. — 2h 40min
9.38 p.m. and 2.10 a.m. — 4h 32min
11:50 and 13:15 — 1h 25min
06:19 and 10:20? — 4h 1min

How many days inclusive
from 28 March to 7 April — 11
from 13 May to 4 June — 23
from 15 July to 3 August — 20
from 24 September to 8 November — 46
from 19 October to 10 December? — 53

F Approximate to the nearest:

£1 a £12.09 — £12.00
b £3.52 — £4.00
10p a £2.37 — £2.40
b £10.06 — £10.10

Write the answer to the nearest penny.

a ⅓ of £7.00 — £2.33
b £3.10 ÷ 7 — 44p
c ⅛ of £17.25 — £2.16
d ¼ of £3.95 — 99p

Approximate to the nearest:

centimetre	0.837m	84cm
metre	305.6cm	3m
kilogram	9kg 550g	10kg
litre	6.325l	6l
½ kilogram	7.750kg	8kg
hour	2h 29min	2h
½ hour	4h 21min.	4½h

CHECK-UP TEST | Number and geometry

A Change to decimal fractions. When necessary work to the nearest second place.

a $\frac{4}{5}$ 0.8 b $\frac{1}{6}$ 0.17 c $\frac{2}{3}$ 0.67 d $\frac{7}{8}$ 0.88 e $\frac{5}{7}$ 0.71

B

$\frac{1}{3} + \frac{1}{2} =$ $\frac{5}{6}$ $\frac{1}{2} - \frac{1}{6} =$ $\frac{1}{3}$ $\frac{2}{3} \times 12 =$ 8

$\frac{1}{4} + \frac{1}{6} =$ $\frac{5}{12}$ $\frac{3}{4} - \frac{2}{3} =$ $\frac{1}{12}$ $10 \times 1\frac{2}{5} =$ 14

$\frac{5}{8} + \frac{3}{4} =$ $1\frac{3}{8}$ $3 - 1\frac{7}{12} =$ $1\frac{5}{12}$ $1\frac{7}{10} \times 20 =$ 34

$\frac{3}{10} + 1\frac{1}{2} =$ $1\frac{4}{15}$ $2\frac{1}{4} - 1\frac{7}{8} =$ $\frac{3}{8}$ $40 \times \frac{3}{8} =$ 15

Express as mixed numbers.

$\frac{137}{10}$ $13\frac{7}{10}$

$93 \div 8$ $11\frac{5}{8}$

$124 \div 9$ $13\frac{7}{9}$

C Write each fraction in its simplest form as a percentage.

a $\frac{12}{20}$ 60% b $\frac{28}{40}$ 70% c $\frac{45}{100}$ 45% d $\frac{24}{32}$ 75% e $\frac{30}{50}$ 60%

Write each of these scales as a fraction.

a 1mm to 20cm $\frac{1}{200}$ b 1cm to 5m $\frac{1}{500}$ c 1cm to 1km $\frac{1}{100000}$

D Fill in the table. The first example is done for you.

	fraction (simplest form)	percentage (%)	ratio
40p of 50p	$\frac{4}{5}$	80%	4:5
300g of 0.5kg	$\frac{3}{5}$	60%	3:5
700ml of 1l	$\frac{7}{10}$	70%	7:10
5p of £1	$\frac{1}{20}$	5%	1:20

	fraction (simplest form)	percentage (%)	ratio
50cm of 2m	$\frac{1}{4}$	25%	1:4
750g of 1.5kg	$\frac{1}{2}$	50%	1:2
250 of 400	$\frac{5}{8}$	62.5%	5:8
35p of £5	$\frac{7}{100}$	7%	7:100

E

8 cost £10. What fraction of £10 do

3 cost $\frac{3}{8}$ 7 cost? $\frac{7}{8}$

5 cost £7. What fraction of £7 do

2 cost $\frac{2}{5}$ 8 cost? $\frac{8}{5}$

10 cost £3.50. What fraction of £3.50 do

9 cost $\frac{9}{10}$ 15 cost? $\frac{3}{2}$

Share each quantity in the given ratio.

£30, ratio 3:2 £18 £12

1.75kg, ratio 4:1 1.4kg 350g

2m, ratio 5:3 125cm 75cm

F

Find the value of

$\frac{3}{10}$ of £1.60 48p

0.75 of 600 450

60% of $\frac{1}{2}$kg 300g

0.9 of 2l 1.8l

50% of 3m 70cm 1m 85cm

$\frac{3}{100}$ of 1kg 30g

0.95 of 10000 9500

17% of £3.00 51p

$\frac{5}{9}$ of 1.8kg. 1kg

Find the whole when

0.25 is £3.50 £14

$\frac{3}{4}$ is 57cm 76cm

10% is 850g 8.5kg

0.6 is 42p 70p

$\frac{5}{8}$ is 2.5kg 4kg

30% is 1.8l 6l

0.375 is 300 800

$\frac{7}{10}$ is 91p £1.30

5% is 200g. 4kg

G Estimate which of the angles marked $a - h$ is:

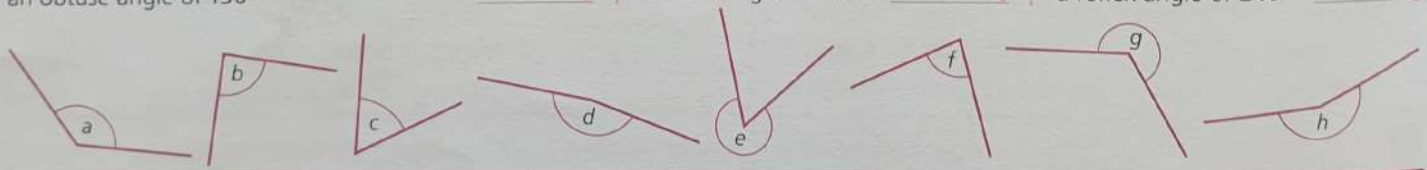
an obtuse angle of 130° a

a right angle b

a reflex angle of 300° e

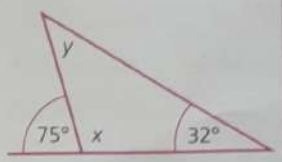
an acute angle of 80° f

a reflex angle of 240° g

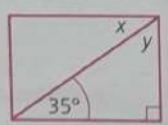


H Find the angle marked x and/or y in each shape.

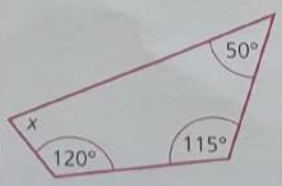
$\angle x$ 105° $\angle y$ 43°



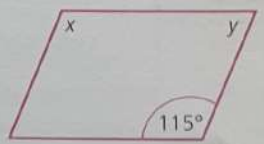
$\angle x$ 35° $\angle y$ 55°



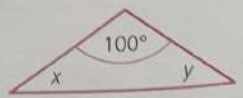
$\angle x$ 75°



$\angle x$ 115° $\angle y$ 65°



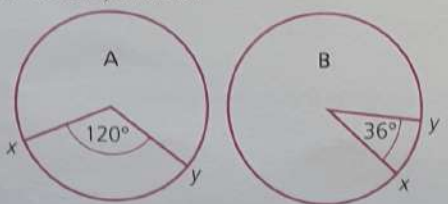
$\angle x$ 40° $\angle y$ 40°



Fill in the table for regular polygons.

name of regular polygon	number of sides	angle at centre
hexagon	6	60°
octagon	8	45°
pentagon	5	72°

What fraction of the circumference is the arc xy in circle A, circle B?



A $\frac{1}{3}$

B $\frac{1}{10}$