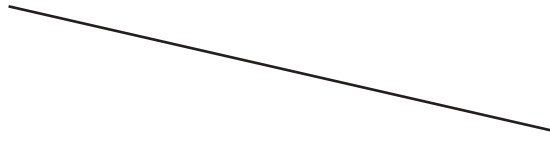




- 1 Measure the length of this line in centimetres.



..... cm [1]

- 2 Work out  $\frac{7}{11}$  of 198 kg.

..... kg [1]

- 3 Work out \$1.45 as a percentage of \$72.50.

..... % [1]

- 4 Calculate.

$$\frac{5.39 - 0.98}{0.743 - 0.0743}$$

..... [1]

- 5 Factorise.

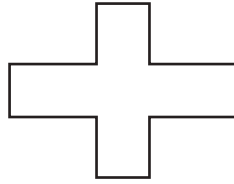
$$y - 2y^2$$

..... [1]

- 6 Work out  $\begin{pmatrix} 2 \\ 5 \end{pmatrix} - \begin{pmatrix} -3 \\ 4 \end{pmatrix}$ .

$\begin{pmatrix} \phantom{0} \\ \phantom{0} \end{pmatrix}$  [1]

7



On the shape, draw all the lines of symmetry.

[2]

8 Share \$72 in the ratio 5 : 4.

\$ ..... , \$ ..... [2]

9 (a) At noon on Wednesday, the temperature was  $5^{\circ}\text{C}$ .  
At midnight, the temperature was  $8^{\circ}\text{C}$  lower.

Work out the temperature at midnight.

.....  $^{\circ}\text{C}$  [1]

(b) At noon on Saturday, the temperature was  $15^{\circ}\text{C}$ .  
At midnight, the temperature was  $-3^{\circ}\text{C}$ .

Work out the difference in these temperatures.

.....  $^{\circ}\text{C}$  [1]

10 Simplify.

$$2p - q - 3q - 5p$$

..... [2]

11 Write these numbers correct to 2 significant figures.

(a) 0.076499

..... [1]

(b) 10 100

..... [1]

- 12 Without using a calculator, work out  $\frac{1}{4} \div \frac{2}{3}$ .

You must show all your working and give your answer as a fraction.

..... [2]

- 13 (a) Write the number five million, two hundred and seven in figures.

..... [1]

- (b) Write 0.008 13 in standard form.

..... [1]

- 14 Write down all the factors of 30.

..... [2]

- 15 Ethan has a box of toys.  
He takes a toy at random.

Toy	Car	Train	Bus	Other
Probability	0.2	0.45		0.08

Complete the table. [2]

- 16 For the line  $y = 4x - 6$ , write down

- (a) the gradient,

..... [1]

- (b) the  $y$ -intercept.

..... [1]

17 The mass,  $m$  kilograms, of Katy's suitcase is 31 kg, correct to the nearest kilogram.

Complete the statement about the value of  $m$ .

.....  $\leq m <$  ..... [2]

18

16 7 23 18 73 20 95 17 89 54

For this list of numbers, find

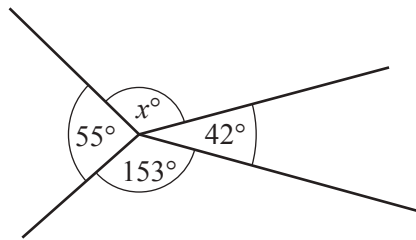
(a) the median,

..... [2]

(b) the range.

..... [1]

19 (a)

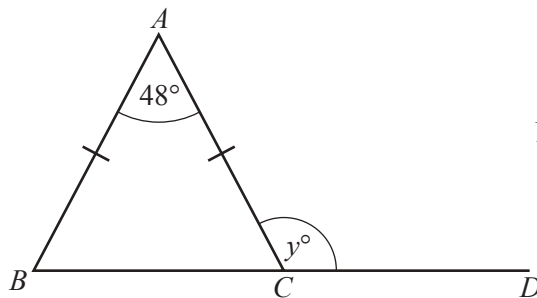


NOT TO SCALE

Find the value of  $x$ .

$x =$  ..... [1]

(b)



NOT TO SCALE

$ABC$  is an isosceles triangle and  $BCD$  is a straight line.

Find the value of  $y$ .

$y =$  ..... [2]

20 Work out the size of an interior angle of a regular 20-sided polygon.

..... [3]

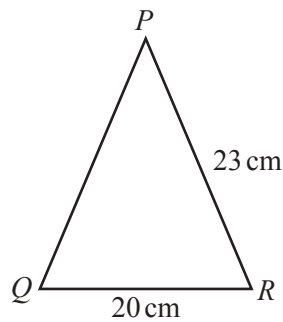
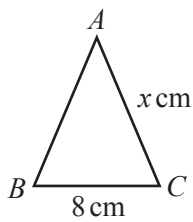
21 The table shows the number of pets owned by each of the 95 students in a school.

Number of pets	Frequency
0	5
1	14
2	39
3	14
4	23

Calculate the mean number of pets.

..... [3]

22

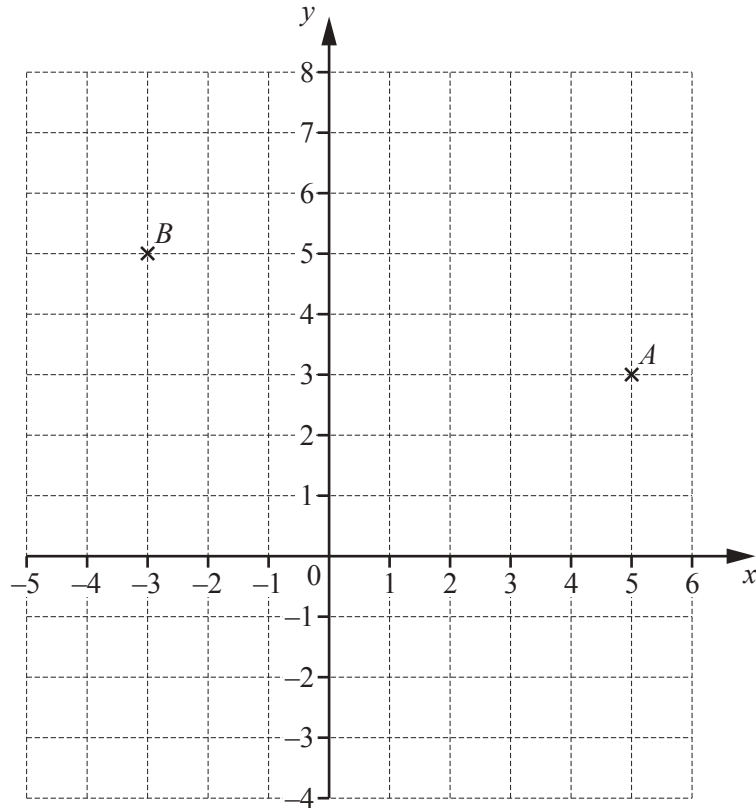


NOT TO  
SCALE

Triangle  $ABC$  is similar to triangle  $PQR$ .

Find the value of  $x$ .

$x =$  ..... [2]



(a) Write down the co-ordinates of point  $A$ .

(....., .....) [1]

(b) Plot the point  $C$  at  $(4, -3)$ .

[1]

(c) Find the vector  $\vec{AB}$ .

$$\vec{AB} = \begin{pmatrix} \phantom{0} \\ \phantom{0} \end{pmatrix} \quad [1]$$

**Questions 24, 25 and 26 are printed on the next page.**

- 24 A car travels at 108 km/h for 20 seconds.

Calculate the distance the car travels.  
Give your answer in metres.

..... m [3]

- 25 Jo invests \$5000 at a rate of 2% per year compound interest.

Calculate the value of her investment at the end of 3 years.

\$ ..... [3]

- 26 Solve.

(a)  $3w - 7 = 32$

$w =$  ..... [2]

(b)  $4(5x + 7) = 42$

$x =$  ..... [3]

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