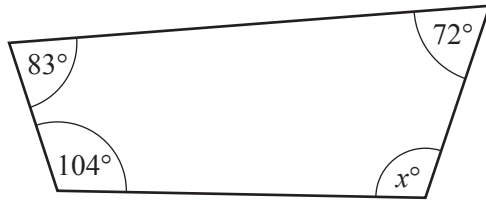




1

NOT TO  
SCALE

The diagram shows a quadrilateral.

Find the value of  $x$ .

$$x = \dots\dots\dots [1]$$

- 2 A watch costs \$80.  
The exchange rate is \$1 = 124.3 Japanese Yen.

Work out the cost of the watch in Yen.

$$\dots\dots\dots \text{Yen} [1]$$

- 3 Work out.  
 $2^{-4} \times 2^5$

$$\dots\dots\dots [1]$$

- 4 Amber's mean mark on five tests is 80.  
Her marks on four of these tests are 68, 81, 74 and 89.

Work out her mark on the fifth test.

$$\dots\dots\dots [2]$$

5 Write 18.766 correct to

(a) 1 decimal place,

..... [1]

(b) 2 significant figures.

..... [1]

6 Calculate.

$$\sqrt{2 + \frac{0.2}{1.7 - 0.9}}$$

..... [2]

7 Factorise completely.

$$12x^2 + 15xy - 9x$$

..... [2]

8 The time,  $t$  seconds, that Jade takes to run a race is 14.3 seconds, correct to 1 decimal place.

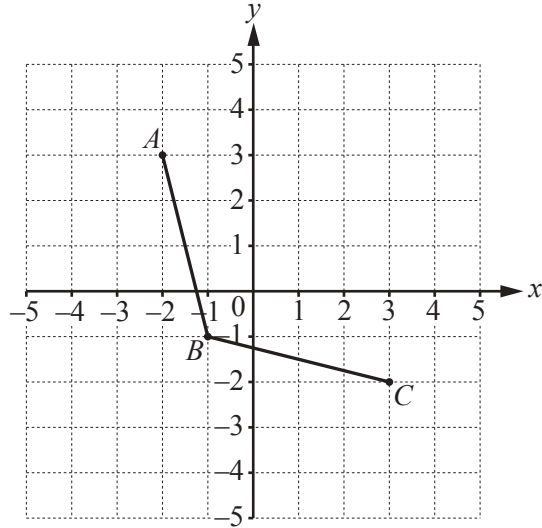
Complete this statement about the value of  $t$ .

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

9 Calculate the area of a circle with diameter 9 cm.

.....  $\text{cm}^2$  [2]

10



The diagram shows two sides of a rhombus  $ABCD$ .

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

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

(b) Complete the rhombus  $ABCD$  on the grid.

[1]

11 (a) Write the fraction  $\frac{30}{54}$  in its lowest terms.

..... [1]

(b) Complete this table.

Fraction	Decimal	Percentage
$\frac{9}{100}$	= .....	= .....

[2]

12 Without using a calculator, work out  $1\frac{2}{3} - \frac{11}{15}$ .

Write down all the steps of your working and give your answer as a fraction in its lowest terms.

..... [3]

13  $\sqrt{5}$   $-7$   $343$   $-11$   $0.4$   $2.5$   $\frac{1}{3}$

From this list of numbers, write down

(a) a cube number,

..... [1]

(b) the smallest number,

..... [1]

(c) a natural number.

..... [1]

14 Work out.

(a)  $\begin{pmatrix} 3 \\ 2 \end{pmatrix} + \begin{pmatrix} -1 \\ 5 \end{pmatrix}$

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

(b)  $\begin{pmatrix} 6 \\ 3 \end{pmatrix} - \begin{pmatrix} 4 \\ -2 \end{pmatrix}$

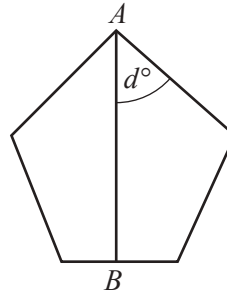
$\begin{pmatrix} \phantom{0} \\ \phantom{0} \end{pmatrix}$  [1]

(c)  $4\begin{pmatrix} 2 \\ 5 \end{pmatrix}$

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

- 15 The diagram shows a regular pentagon.  
 $AB$  is a line of symmetry.

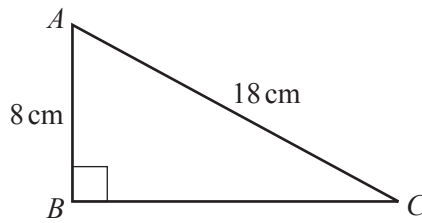
Work out the value of  $d$ .



NOT TO SCALE

$d = \dots\dots\dots [3]$

- 16



NOT TO SCALE

Calculate the length of  $BC$ .

$BC = \dots\dots\dots \text{ cm } [3]$

- 17 Simplify.

(a)  $(m^5)^2$

$\dots\dots\dots [1]$

(b)  $4x^3y \times 5x^2y$

$\dots\dots\dots [2]$

- 18 Solve the simultaneous equations.  
You must show all your working.

$$\begin{aligned}3x + 4y &= 6 \\6x - y &= -15\end{aligned}$$

$x = \dots\dots\dots$

$y = \dots\dots\dots [3]$

- 19 (a) Juan asks 40 people which language they speak at home.  
The table shows the results.

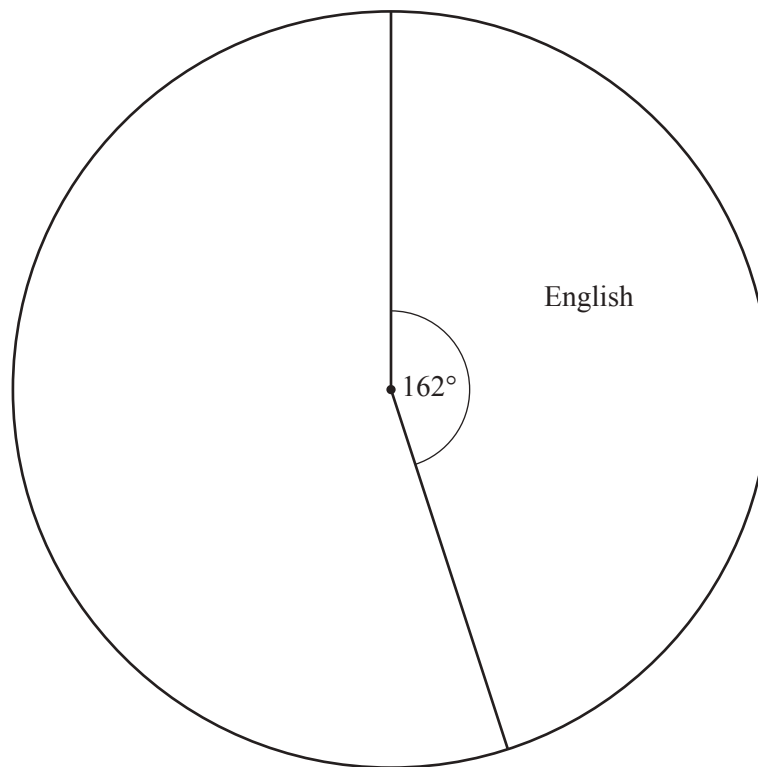
Language	Frequency	Pie chart sector angle
English	18	$162^\circ$
French	11	
Spanish	7	
Other	4	

Juan wants to draw a pie chart to show this information.

- (i) Complete the table.

[3]

- (ii) Complete the pie chart.



[1]

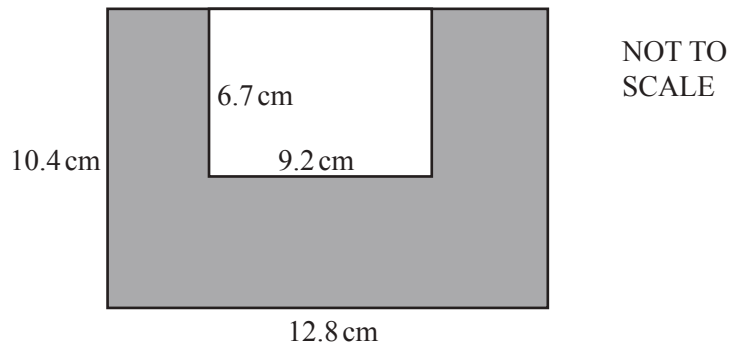
- (b) Mansoor also asks some people which language they speak at home.  
In Mansoor's pie chart, the sector angle for Portuguese is  $108^\circ$ .

Write down the fraction of these people who do **not** speak Portuguese at home.

..... [1]



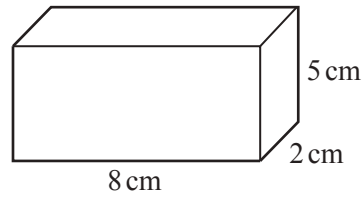
20 (a)



The diagram shows a small rectangle inside a large rectangle.  
Work out the shaded area.

..... cm<sup>2</sup> [2]

(b)

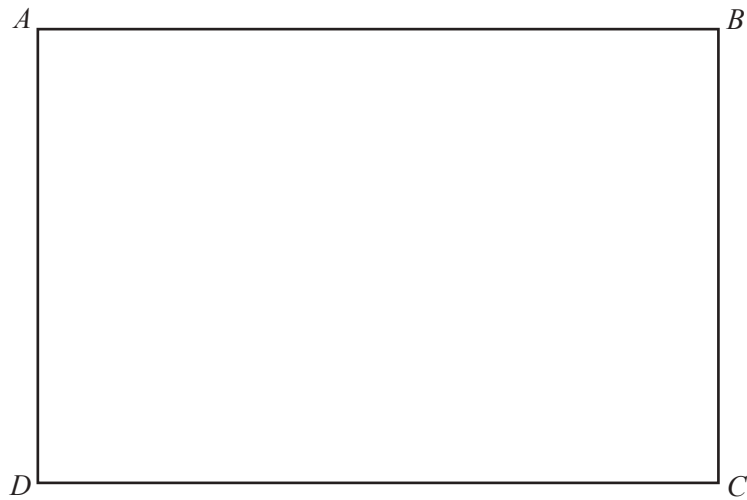


NOT TO SCALE

Work out the surface area of this cuboid.

..... cm<sup>2</sup> [3]

21 The diagram shows a rectangle  $ABCD$ .



(a) In this part, use a straight edge and compasses only and show your construction arcs.

Construct

(i) the bisector of angle  $DCB$ , [2]

(ii) the perpendicular bisector of  $DC$ . [2]

(b) Shade the region containing the points inside the rectangle that are

- nearer to  $D$  than to  $C$
- and
- nearer to  $BC$  than to  $DC$ . [1]



**BLANK PAGE**

---

Permission to reproduce items where third-party owned material protected by copyright is included has been sought and cleared where possible. Every reasonable effort has been made by the publisher (UCLES) to trace copyright holders, but if any items requiring clearance have unwittingly been included, the publisher will be pleased to make amends at the earliest possible opportunity.

To avoid the issue of disclosure of answer-related information to candidates, all copyright acknowledgements are reproduced online in the Cambridge International Examinations Copyright Acknowledgements Booklet. This is produced for each series of examinations and is freely available to download at [www.cie.org.uk](http://www.cie.org.uk) after the live examination series.

Cambridge International Examinations is part of the Cambridge Assessment Group. Cambridge Assessment is the brand name of University of Cambridge Local Examinations Syndicate (UCLES), which is itself a department of the University of Cambridge.