Cambridge IGCSE

Cambridge International Examinations
Cambridge International General Certificate of Secondary Education

CANDIDATE NAME

CENTRE NUMBER

CANDIDATE NUMBER

8954228092

CAMBRIDGE INTERNATIONAL MATHEMATICS **0607/11**

Paper 1 (Core) **October/November 2018**

45 minutes

Candidates answer on the Question Paper.

Additional Materials: Geometrical Instruments

READ THESE INSTRUCTIONS FIRST

Write your Centre number, candidate number and name on all the work you hand in.
Write in dark blue or black pen.
Do not use staples, paper clips, glue or correction fluid.
You may use an HB pencil for any diagrams or graphs.
DO **NOT** WRITE IN ANY BARCODES.

Answer **all** the questions.
CALCULATORS MUST NOT BE USED IN THIS PAPER.
All answers should be given in their simplest form.
You must show all the relevant working to gain full marks and you will be given marks for correct methods even if your answer is incorrect.
The number of marks is given in brackets [ ] at the end of each question or part question.
The total number of marks for this paper is 40.

This document consists of **8** printed pages.

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Formula List

Area, A, of triangle, base b, height h.	$A = \frac{1}{2}bh$
Area, A, of circle, radius r.	$A = \pi r^2$
Circumference, C, of circle, radius r.	$C = 2\pi r$
Curved surface area, A, of cylinder of radius r, height h.	$A = 2\pi rh$
Curved surface area, A, of cone of radius r, sloping edge l.	$A = \pi rl$
Curved surface area, A, of sphere of radius r.	$A = 4\pi r^2$
Volume, V, of prism, cross-sectional area A, length l.	$V = Al$
Volume, V, of pyramid, base area A, height h.	$V = \frac{1}{3}Ah$
Volume, V, of cylinder of radius r, height h.	$V = \pi r^2 h$
Volume, V, of cone of radius r, height h.	$V = \frac{1}{3}\pi r^2 h$
Volume, V, of sphere of radius r.	$V = \frac{4}{3}\pi r^3$

Answer **all** the questions.

1 Write the number ten thousand and eleven in figures.

..... [1]

2 Find 10% of 200.

..... [1]

3 6 8 10 12 14 16

From the list of numbers write down

(a) a cube number, ... [1]

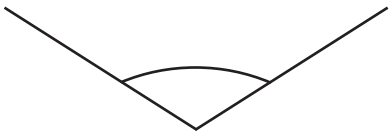
(b) a triangle number. ..... [1]

4 Work out.

$-5 \times -4 - 2$

..... [1]

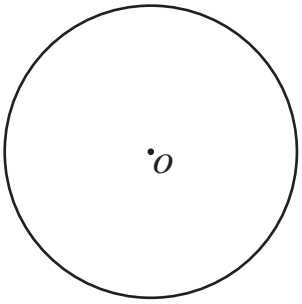
5



Write down the mathematical name for the angle shown.

..... [1]

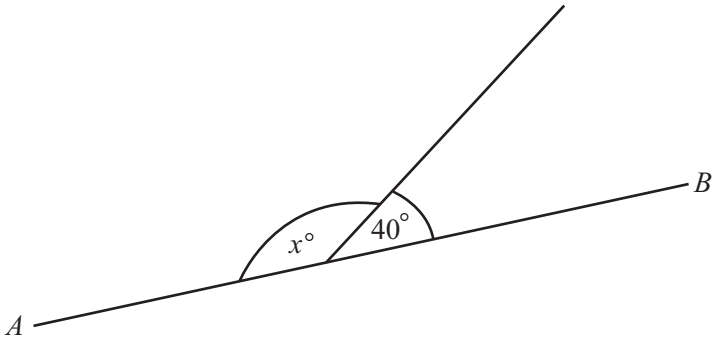
6



O is the centre of the circle.

On the diagram, draw a diameter. [1]

7



NOT TO SCALE

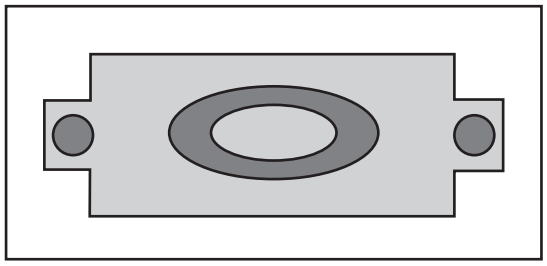
AB is a straight line.
Find the value of *x*.

x = ... [1]

8 Change 3 kg into grams.

..... g [1]

9



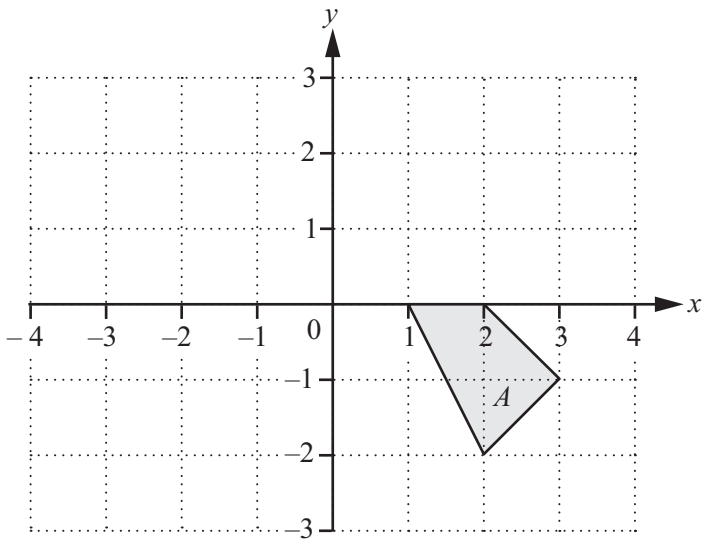
Complete the statement.

The diagram has rotational symmetry of order ..... [1]

10 Divide 42 in the ratio 2 : 5.

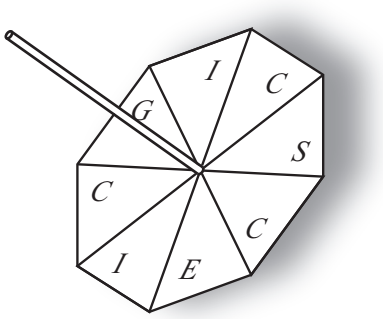
..... and ..... [2]

11



On the grid, draw the image of shape A after a reflection in the y-axis. [1]

12



Xander spins this unbiased spinner and records the letters it lands on.

Write down the letter he is most likely to record.

..... [1]

13 In a sale, the price of a washing machine is reduced by 25%.
The original price is $400.

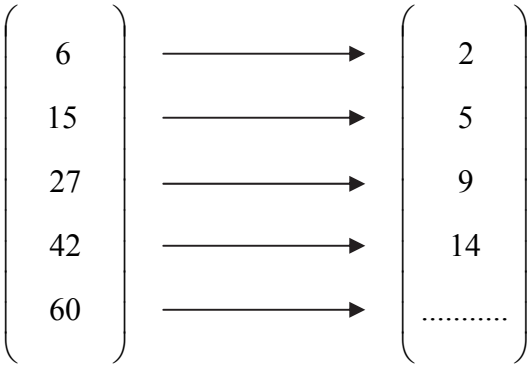
Work out the sale price.

$ ..... [2]

14 Write down the lowest common multiple (LCM) of 10 and 12.

$ ..... [2]

15 Complete the mapping diagram.



[1]

16 The volume of a cone can be estimated using the following formula.

$$\text{Volume} = \text{height} \times (\text{base radius})^2$$

Use this formula to find the volume of a cone with base radius 6 cm and height 5 cm.

..... cm^3 [2]

17 Asha takes 20 minutes to walk to school.
She walks at 4.5 km / h.

Work out how far Asha walks.

..... km [2]

18 The exterior angle of a regular polygon is 20°.

Find the number of sides of this polygon.

..... [2]

19 The time taken, in minutes, by each of 12 students to walk to school is shown below.

22	10	23	11	20	24
21	15	29	24	6	11

(a) Work out the range.

..... min [1]

(b) Find the median.

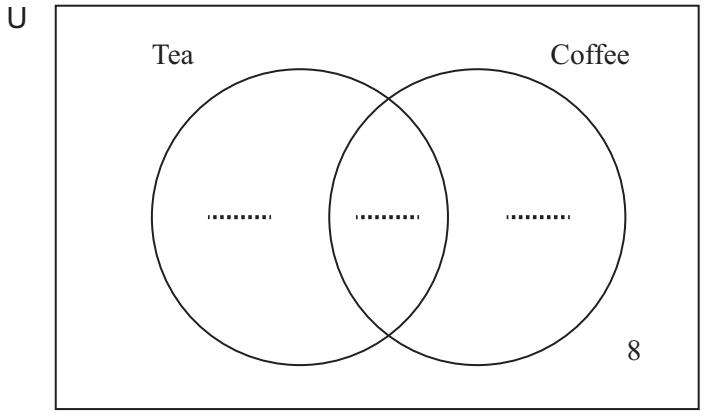
..... min [2]

(c) Find the lower quartile.

..... min [1]

20 40 students were asked if they liked tea or coffee.
10 liked tea only.
16 liked coffee only.
8 did not like tea or coffee.

Use this information to complete the Venn diagram.



[2]

Questions 21, 22, 23 and 24 are printed on the next page.

21 A is the point (6, 4) and B is the point (3, 9).

Write down $\overrightarrow{AB}$.

$\overrightarrow{AB} = \begin{pmatrix} \quad \\ \quad \end{pmatrix}$ [2]

22 Write down all the integer values of x that satisfy $-2 < x \leqslant 2$.

..... [2]

23 Factorise completely.

$4x^2 + 6x$

..... [2]

24 Solve the simultaneous equations.

$5x + y = 8$
$3x + 2y = 9$

$x =$ .....

$y =$ ..... [3]