Cambridge IGCSE

Cambridge International Examinations
Cambridge International General Certificate of Secondary Education

CANDIDATE NAME	
CENTRE NUMBER	
CANDIDATE NUMBER	

0970045139

CAMBRIDGE INTERNATIONAL MATHEMATICS **0607/13**

Paper 1 (Core) **October/November 2014**

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 **10** printed pages and **2** blank 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.	$V = \frac{4}{3}\pi r^3$

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1 **(a)** Write twenty thousand two hundred in figures.

Answer (a) ..... [1]

(b) Work out.

$20 - 7 \times 2$

Answer (b) ..... [1]

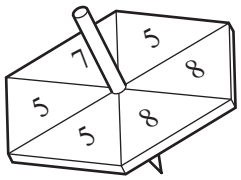
(c) Complete the following statement.

$$\frac{6}{7} = \frac{\square}{35}$$

[1]

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2 The diagram shows a fair spinner in the shape of a regular hexagon.

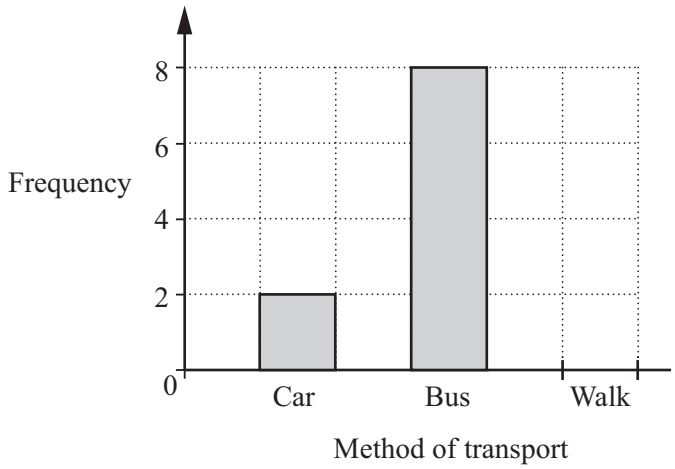


Which number is the spinner most likely to land on?

Answer ..... [1]

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3 The bar chart and the frequency table show the methods of transport used by a group of students, on one day, to travel from home to school.



Method of transport	Frequency
Car	
Bus	8
Walk	4

(a) Use the frequency table to complete the bar chart. [1]

(b) Use the bar chart to complete the frequency table. [1]

(c) How many students are in the group?

Answer (c) ..... [1]

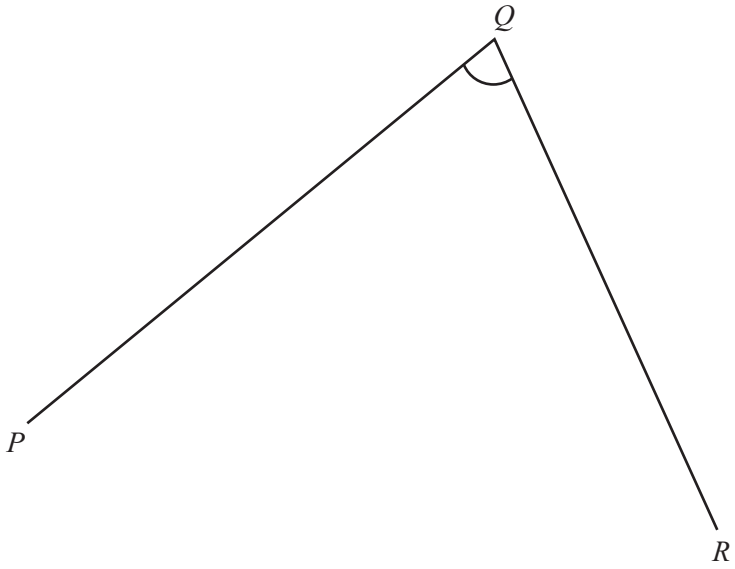
(d) The bus fare for travelling to school is $2.

Find the total amount paid by the students who travelled by bus.

Answer (d) $ ..... [2]

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4 Measure and write down the size of angle *PQR*.



Answer ..... [1]

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5 A dice was rolled twelve times. These are the scores.

5 1 4 4 2 3 1 1 4 2 5 1

Find

(a) the range,

Answer (a) ..... [1]

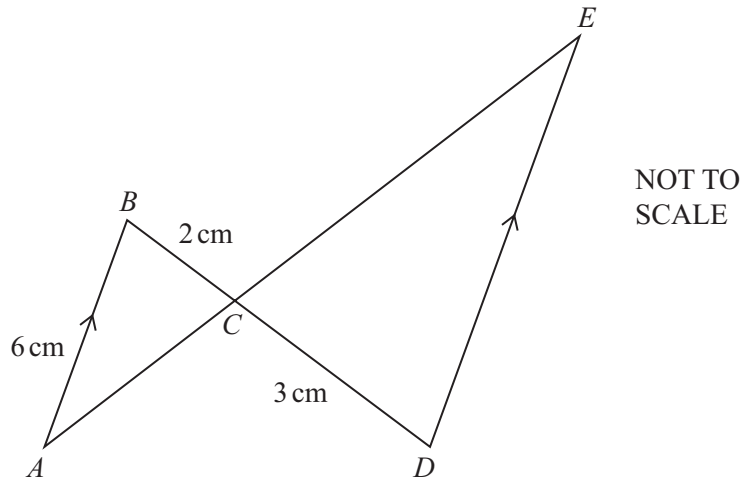
(b) the mode,

Answer (b) ..... [1]

(c) the median.

Answer (c) ..... [2]

6



NOT TO SCALE

In the diagram AB is parallel to DE.

(a) Complete the following.

(i) Angle ABC = angle ..... [1]

(ii) Angle BAC = angle ..... [1]

(iii) Triangle ABC is ..... to triangle EDC because .....

..... [2]

(b) $AB = 6$ cm, $BC = 2$ cm and $CD = 3$ cm.

Work out the length of DE.

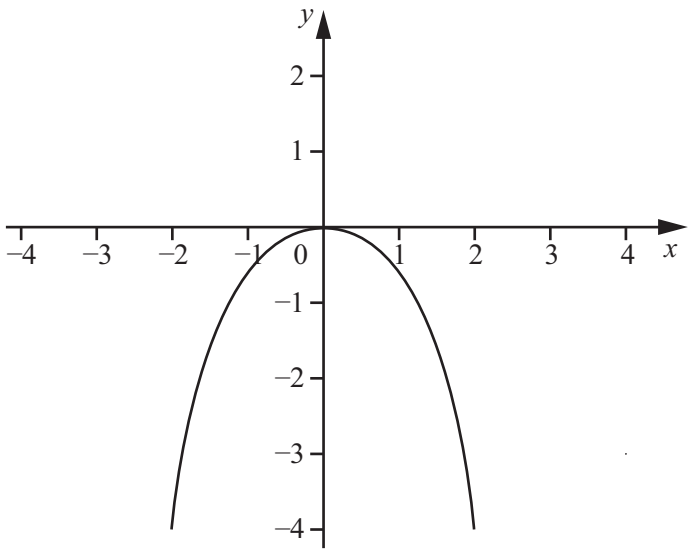
Answer (b) ..... cm [2]

7 Find the circumference of a circular pond of radius 4 m.
Leave your answer in terms of π.

Answer ..... m [2]

---

8 The diagram shows the graph of $y = f(x)$ for $-2 \leqslant x \leqslant 2$.



On the same diagram, sketch the graph of $y = f(x) + 2$. [2]

---

9 An aircraft flies for 2 hours and travels a distance of 1500 km.

(a) Work out the speed of the aircraft.

Answer (a) ..... km/h [1]

(b) Write your answer to **part (a)** in standard form.

Answer (b) ..... [1]

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10 **(a)** Factorise completely.

$6pq + 2p$

Answer (a) ..... [2]

(b) Solve the following equation.

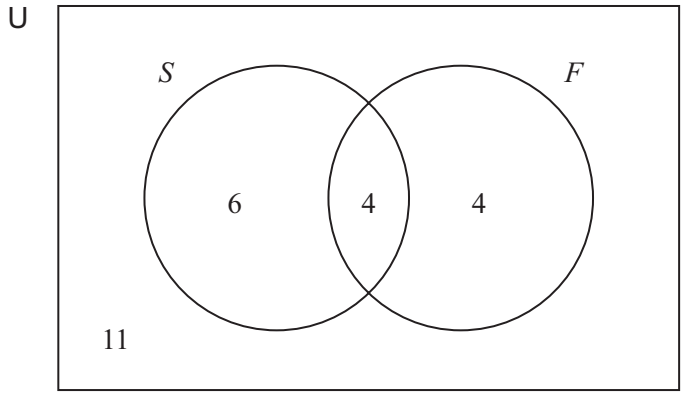
$4 - 2x = 6 - 5x$

Answer (b) $x =$ ..... [2]

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11 Some of the students in a language class have visited Spain (S), some have visited France (F), some have visited neither country and some have visited both countries.

The Venn diagram below illustrates this.



(a) Write down $n(S \cup F)'$.

Answer (a) ..... [1]

(b) Work out the **total** number of students.

Answer (b) ..... [1]

One student is chosen at random.

(c) What is the probability that a student has been to France but not to Spain?

Answer (c) ..... [1]

(d) What is the probability that a student has been to France or to Spain or to both countries?

Answer (d) ..... [1]

12 **(a)** Solve the simultaneous equations.

$$5x + 3y = 13$$
$$3x + 5y = 11$$

Answer (a) $x =$ .....

$y =$ ..... [4]

(b) The cost of buying 5 burgers and 3 drinks is \$13.
The cost of buying 3 burgers and 5 drinks is \$11.

Find the cost of buying 2 burgers and 2 drinks.

Answer (b) \$ ..... [2]

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