Cambridge International Examinations
Cambridge International General Certificate of Secondary Education

CANDIDATE NAME									
CENTRE NUMBER						CANDIDATE NUMBER			

* 0 2 4 8 8 6 0 7 9 6 *

CAMBRIDGE INTERNATIONAL MATHEMATICS **0607/13**

Paper 1 (Core) **May/June 2015**

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.	$V = \frac{4}{3}\pi r^3$

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Answer **all** the questions.

1 **(a)** Write forty five thousand in figures.

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

(b) Write in words the number 2136.

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

---

2 Work out.

$3 + 4 \times 5$

Answer ..... [1]

---

3 Complete the table.

Fraction	Decimal	Percentage
$\frac{1}{4}$		25%
$\frac{3}{10}$	0.3	
	0.6	60%

[3]

---

4 Write down the value of the following.

(a) $\sqrt{81}$

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

(b) $\sqrt[3]{125}$

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

---

5 Change 4.1 metres into millimetres.

Answer ..... mm [1]

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6 Name two 4-sided shapes with rotational symmetry order 2.

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

---

7 Divide \$35 in the ratio 4 : 3.

Answer \$ ..... and \$ ..... [2]

---

8 The mean of four numbers is 10.
Three of the numbers are 6, 15 and 12.

Find the other number.

Answer ..... [2]

---

9 Work out.

$$\frac{7}{10} - \frac{2}{5}$$

Answer ..... [2]

---

10 Expand the brackets.

$$4x\,(2x - 3)$$

Answer ..... [2]

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11 Solve the following simultaneous equations.

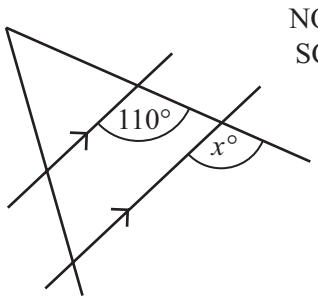
$$4x + y = 13$$
$$2x - y = 5$$

Answer $x =$ .....

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

---

12 (a)

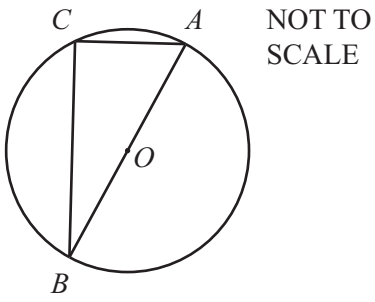


Find the value of x, giving a reason for your answer.

Answer(a) ..... because .....

..... [2]

(b)



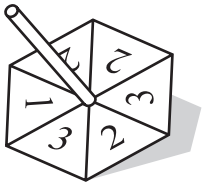
The diagram shows a circle, centre O.

Write down the size of angle ACB.
Give a reason for your answer.

Answer(b) = ... because .....

..... [2]

13



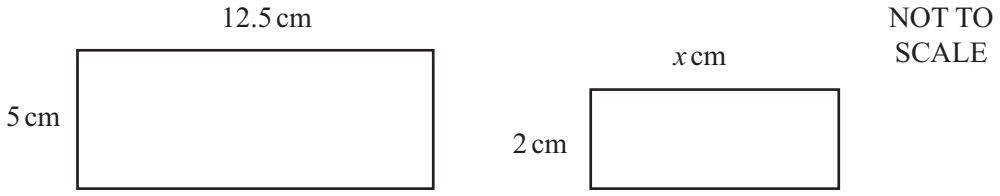
A fair 6-sided spinner is numbered 1, 2, 2, 2, 3 and 3.
The spinner is spun once.

Find the probability that the spinner lands on 3.

Answer ..... [1]

---

14 These two rectangles are similar.



Find the value of x.

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

---

15 $f(x) = 3x + 1$

Find

(a) $f(4)$,

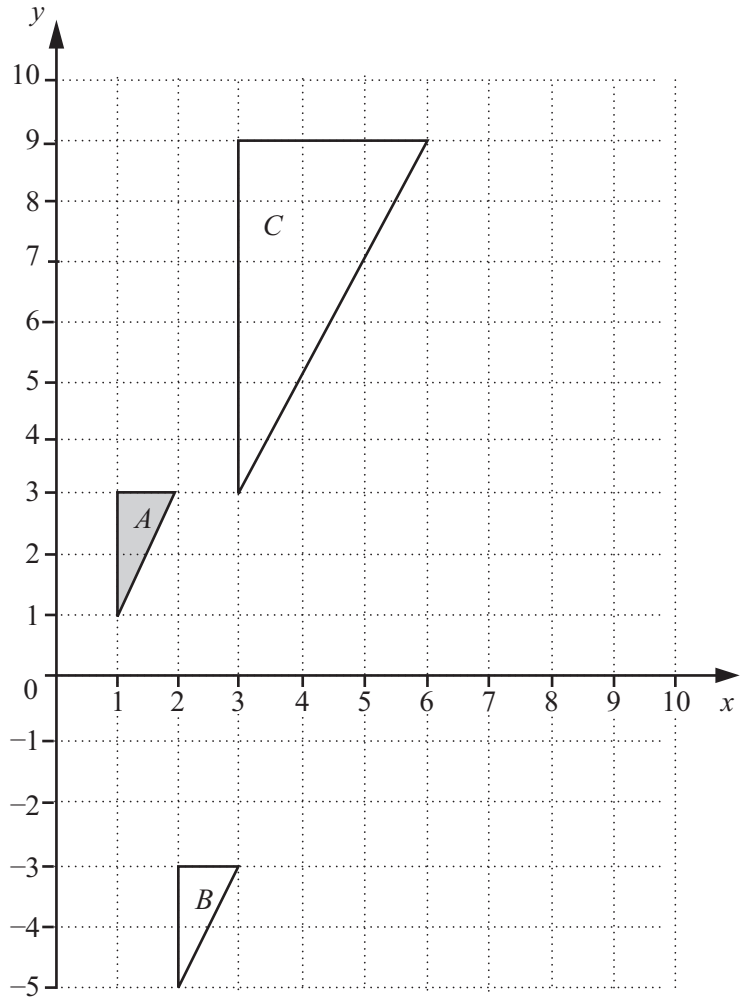
Answer(a) ..... [1]

(b) $f\left(-\frac{1}{3}\right)$.

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

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16



Describe fully the **single** transformation that maps

(a) triangle *A* onto triangle *B*,

Answer(a) .....

..... [2]

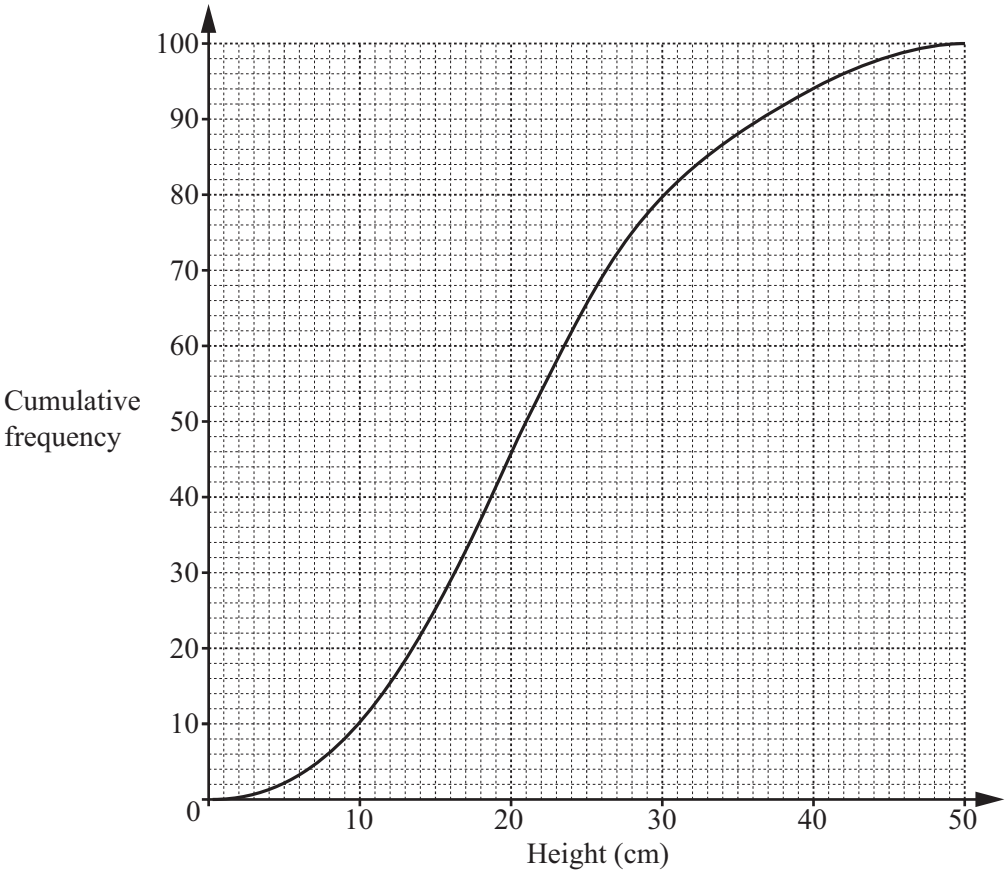
(b) triangle *A* onto triangle *C*.

Answer(b) .....

..... [3]

Question 17 is printed on the next page.

17 The cumulative frequency curve shows the heights of 100 plants.



Find

(a) the median,

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

(b) the inter-quartile range,

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

(c) the number of plants that are more than 40 cm in height.

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

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