Cambridge International Examinations
Cambridge International General Certificate of Secondary Education

CANDIDATE NAME									
CENTRE NUMBER						CANDIDATE NUMBER			

* 5 9 4 0 1 6 4 2 9 2 *

CAMBRIDGE INTERNATIONAL MATHEMATICS **0607/11**

Paper 1 (Core) **October/November 2016**

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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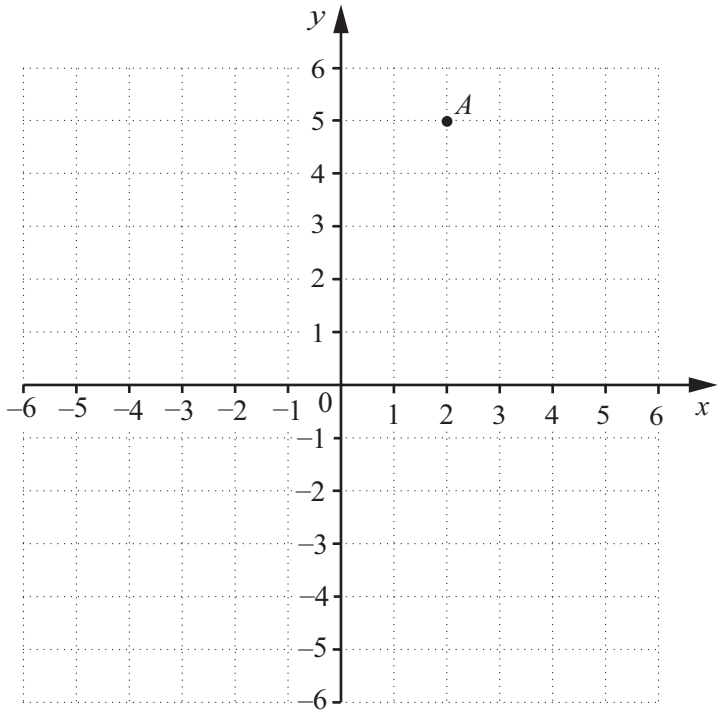
Formula List

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

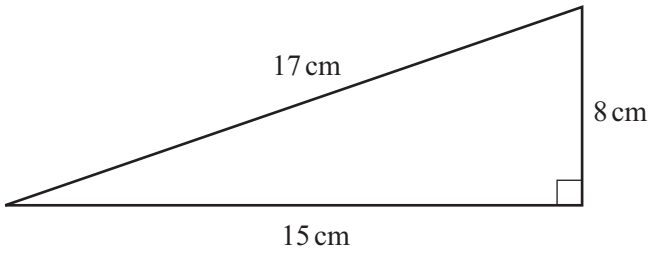


(a) Write down the co-ordinates of point *A*.

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

(b) Plot the point (4, –2) . Label this point *B*. [1]

2



NOT TO SCALE

Find the perimeter of this triangle.

..... cm [1]

3 Write down all the factors of 35.

..... [2]

4 Insert one pair of brackets in each of the following statements to make them correct.

(a) $6 + 3 \times 4 - 12 = 24$

[1]

(b) $6 + 3 \times 4 - 12 = -18$

[1]

5 Work out $\frac{7}{10}$ of 250.

..... [1]

6 A recipe uses 200 g of rice for 4 people.

Work out how much rice this recipe uses for 10 people.

..... g [2]

7 **(a)** Change 7.2 kilograms into grams.

..... g [1]

(b) Change 86 000 cm^3 into m^3.

..... m^3 [1]

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8 The cost, \$$C$, of renting a car for n days is

$$C = 20 + 12n \ .$$

(a) Find the cost of renting a car for 5 days.

\$ ..... [1]

(b) The cost of renting a car was \$104.

Find the number of days for which the car was rented.

..... [2]

9 Here are three sets A, B and C.

$A = \{2, 5, 6, 7, 9, 16\}$ $B = \{5, 6, 7, 9\}$ $C = \{\text{even integers between 1 and 10}\}$

(a) Write down all the possible values for x when $x \in A$ and $x \notin B$.

..... [1]

(b) List the elements of $A \cap C$.

..... [1]

10 **(a)** Expand the brackets.

$$-3(x - 2)$$

..... [1]

(b) Factorise completely.

$$6x - 10xy$$

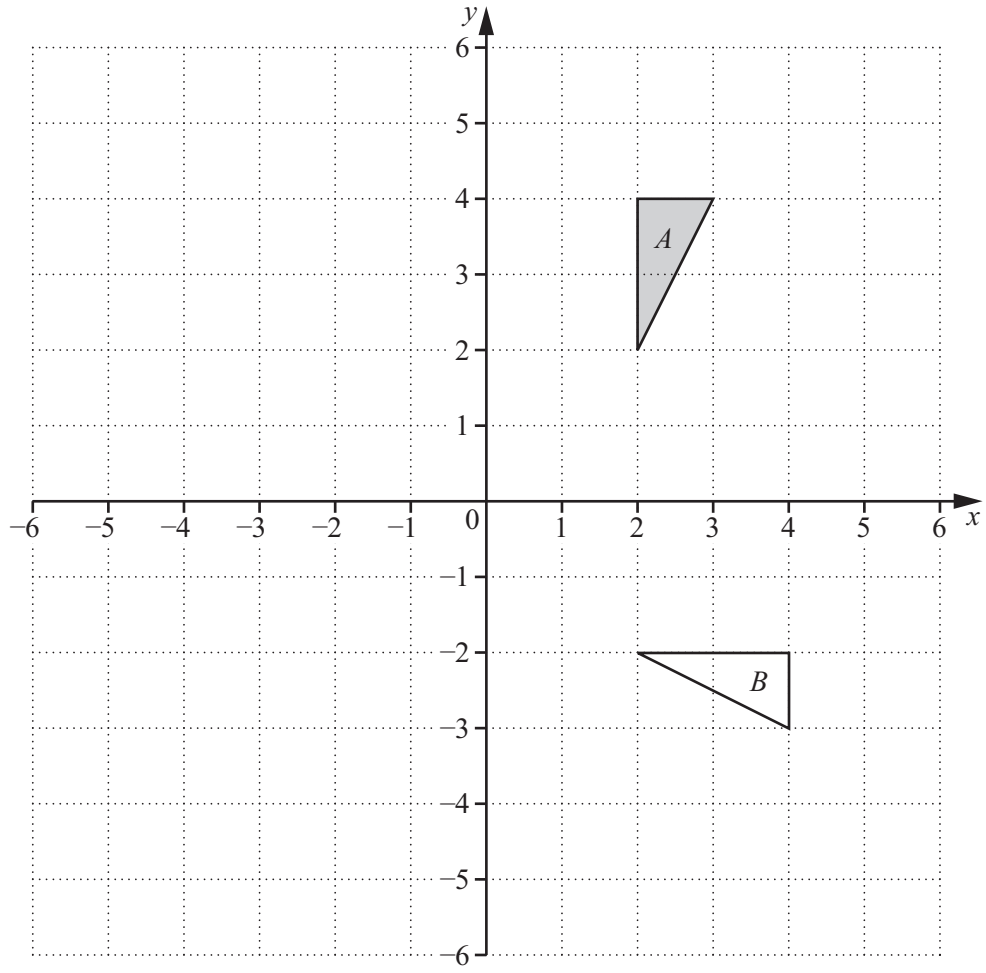
..... [2]

11 A line is parallel to $y = 3x + 1$.
It passes through the point (0, 7).

Write down the equation of this line in the form $y = mx + c$.

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

12



(a) Reflect triangle A in the line $x = -1$. [2]

(b) Describe the **single** transformation that maps triangle A onto triangle B.

.....

..... [3]

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13 The list shows the number of ice creams sold each day by a shop for a 10 day period.

75 62 93 82 109 89 76 87 96 494

(a) Write down whether this type of data is discrete or continuous. Explain your answer.

..... because .....

..... [2]

(b) Write down which of the mean or median is the most suitable average to use for this data. Explain your answer.

..... because .....

..... [2]

14 Simplify.

$$\frac{x}{2}+\frac{x}{3}$$

..... [2]

15 Solve the simultaneous equations.

$$3x + 4y = 23$$
$$6x - 2y = 26$$

$x =$ .....

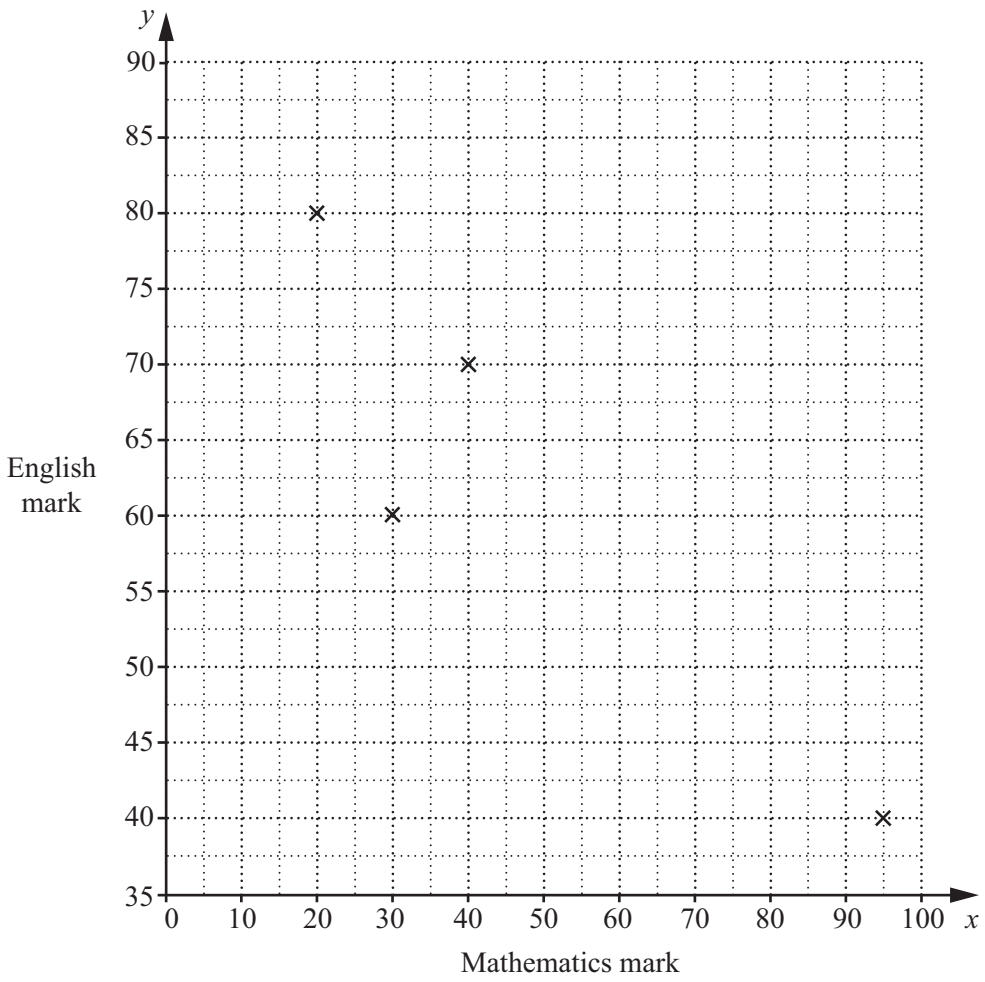
$y =$ ..... [3]

Question 16 is printed on the next page.

16 The table shows the mathematics mark, x, and the English mark, y, for each of nine students in a test.

Mathematics mark (x)	95	40	30	20	70	60	80	30	25
English mark (y)	40	70	60	80	45	40	45	75	85

(a) Complete the scatter diagram.
The first four points have been plotted for you.



[2]

(b) Write down the type of correlation shown on the scatter diagram.

..... [1]

(c) The mean mathematics mark is 50 and the mean English mark is 60.

Using this information, draw the line of best fit on your diagram. [1]

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