Cambridge IGCSE

Cambridge International Examinations
International General Certificate of Secondary Education

CANDIDATE NAME									
CENTRE NUMBER						CANDIDATE NUMBER			

2400943248

CAMBRIDGE INTERNATIONAL MATHEMATICS **0607/12**

Paper 1 (Core) **May/June 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 **11** printed pages and **1** blank page.

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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 $\frac{7}{10}$ as a percentage.

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

(b) Work out.

$4 \times 5 - 6 \div 2$

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

(c) Write down the prime number in this list.

21 23 25 27

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

(d) Write 307 000 in standard form.

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

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2 Jane chooses a sweet at random from a bag containing 7 mints and 7 toffees.

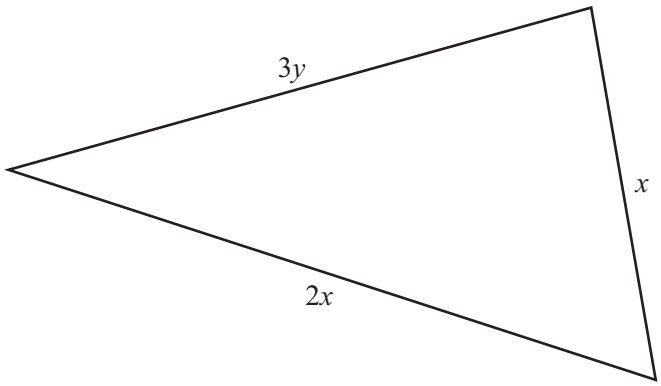
Choose one term from the list to best describe the probability that Jane chooses a mint.

Impossible	*Unlikely*	*50:50*	*Likely*	*Certain*

Answer ..... [1]

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3



NOT TO SCALE

(a) Write down an expression in x and y for the perimeter of the triangle. Simplify your answer.

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

(b) Using your answer to part **(a)** find the perimeter when $x = 4$ and $y = 2$.

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

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4 Work out the upper quartile and the lower quartile of this list of numbers.

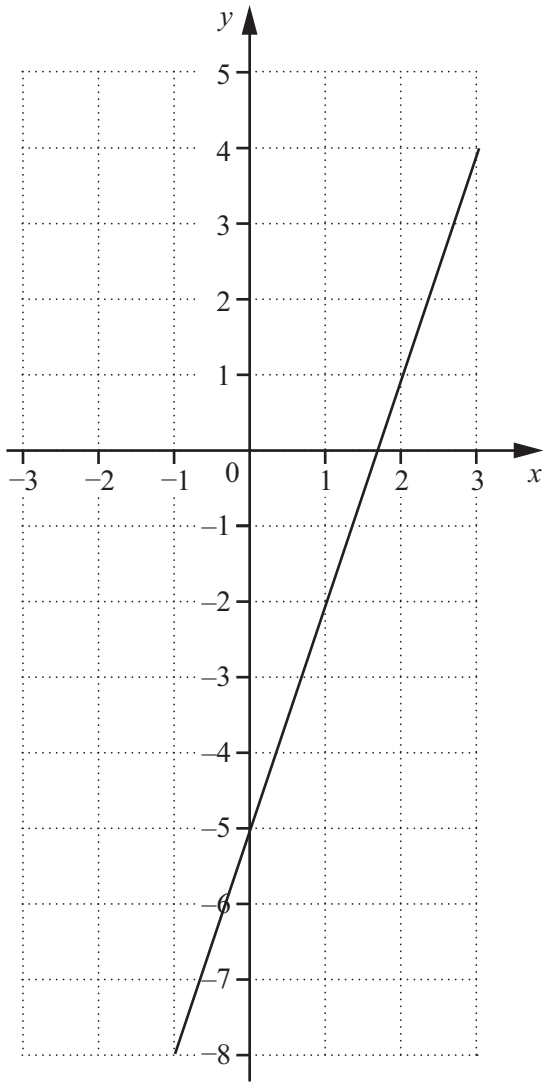
1 10 4 6 7 6 9 10 9 9

Answer Upper Quartile .....

Lower Quartile ..... [2]

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5



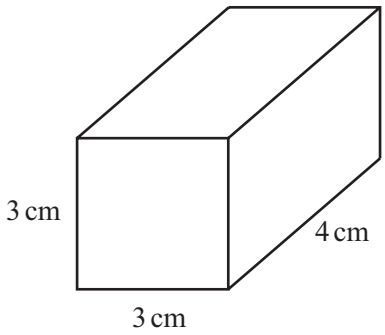
The diagram shows the line $y = 3x - 5$.

(a) On the same diagram, draw the line $y = -2$. [1]

(b) Write down the co-ordinates of the point of intersection of the lines $y = 3x - 5$ and $y = -2$.

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

6 A cuboid measures 3 cm by 4 cm by 3 cm.

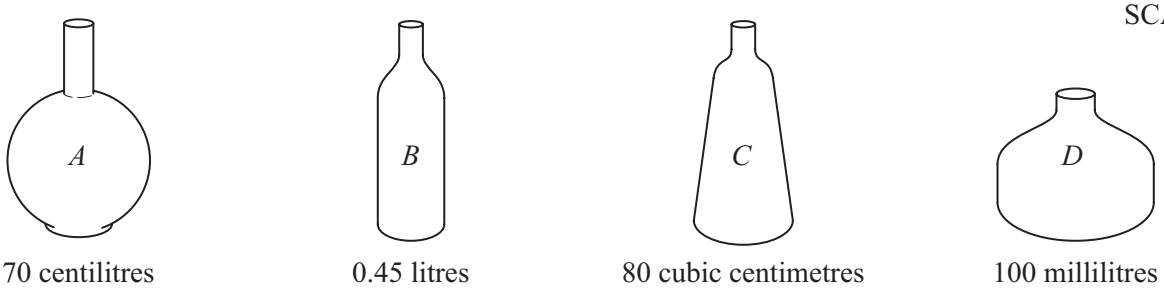


NOT TO SCALE

Find the volume of the cuboid.
Give the units of your answer.

Answer .... [3]

7



NOT TO SCALE

70 centilitres | 0.45 litres | 80 cubic centimetres | 100 millilitres

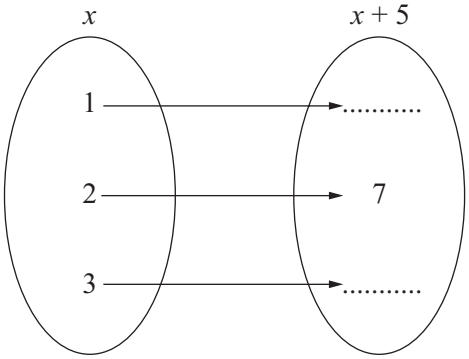
The volume of each of four containers is shown above.

List the containers in order of size, starting with the smallest.

Answer ..... , ... , ... , ... [2]
smallest

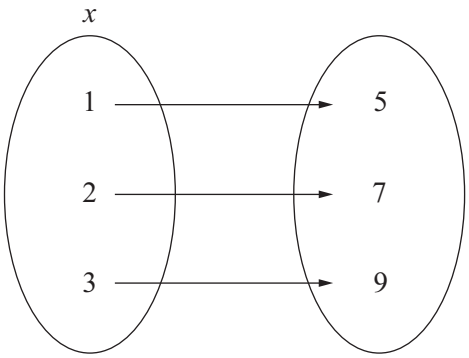
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8 **(a)** Complete the mapping diagram for the function $f : x \mapsto x + 5$.



[2]

(b) Here is a different mapping diagram.



For this mapping diagram complete the statement $f : x \mapsto$ …… [2]

9 Work out, giving your answer as a fraction in its lowest terms.

(a) $\frac{3}{8} + \frac{2}{3}$

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

(b) $\frac{3}{8} \times \frac{2}{3}$

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

(c) $3\frac{3}{8} - 1\frac{2}{3}$

Answer (c) ..... [3]

10 **(a)** Factorise completely.

$7pq + 14p - 7pt$

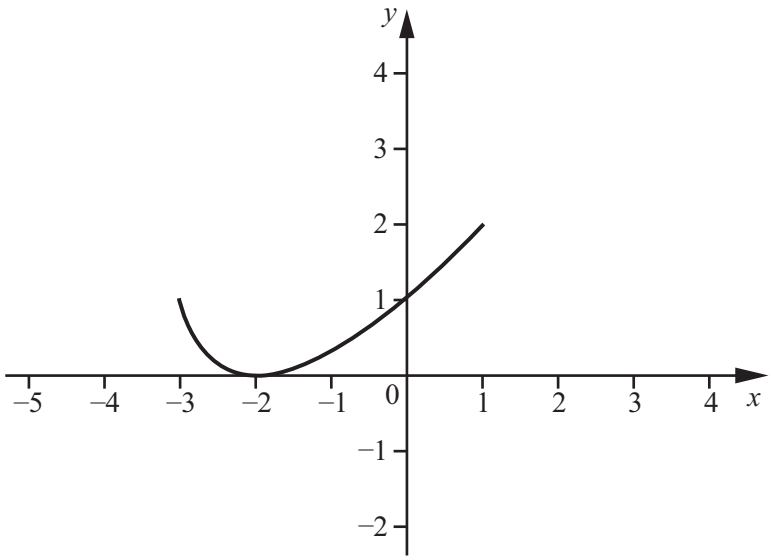
Answer (a) ..... [2]

(b) Expand the brackets and simplify.

$10(b - 3a) - 2(a + b)$

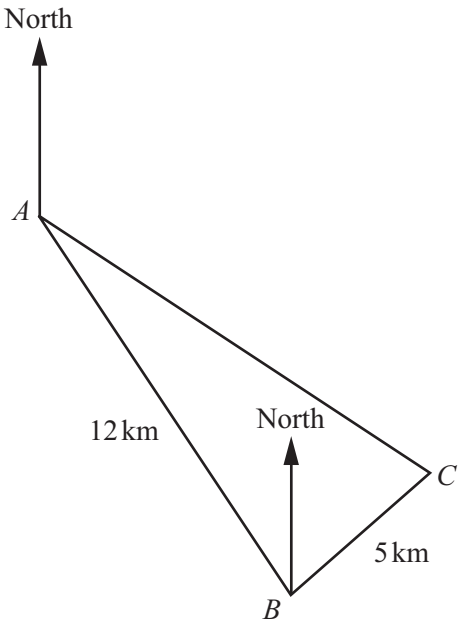
Answer (b) ..... [2]

11 The diagram shows the graph of $y = f(x)$ for $-3 \leqslant x \leqslant 1$.



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

12 A boat sails for 12 km from A to B on a bearing of 120°.
The boat changes direction and sails for 5 km on a bearing of 030° to C.



(a) Write down the bearing of A from B.

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

(b) Work out the distance AC.

Answer (b) ..... km [3]

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