Cambridge IGCSE

Cambridge International Examinations
Cambridge International General Certificate of Secondary Education

CANDIDATE NAME									
CENTRE NUMBER						CANDIDATE NUMBER			

CAMBRIDGE INTERNATIONAL MATHEMATICS **0607/12**

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 **11** printed pages and **1** blank page.

CAMBRIDGE International Examinations

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 Work out.

(a) $23 - 6 \times 3$

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

(b) $8 \div (32 \div 4)$

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

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2 Write down the five factors of 16.

Answer ..... [2]

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3 Joe buys a magazine for $1.50 and a drink for $2.35.

How much change does Joe get from $5?

Answer $ ..... [2]

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4 **(a)** Write down the next fraction in this sequence.

$$\frac{1}{2}, \quad \frac{1}{5}, \quad \frac{1}{8}, \quad \frac{1}{11}, \quad \frac{1}{14}, \quad \ldots$$

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

(b) The nth term of a sequence is $n^2 - 3$.

Find the first three terms of this sequence.

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

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5 In the last ten football matches, West Port FC scored the following numbers of goals.

2 5 1 1 4 7 1 3 1 4

Find

(a) the range,

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

(b) the median,

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

(c) the mean.

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

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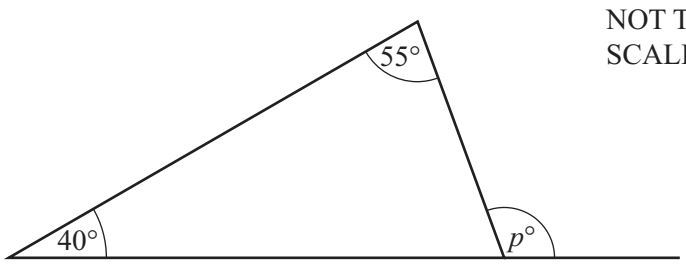
6 (a)

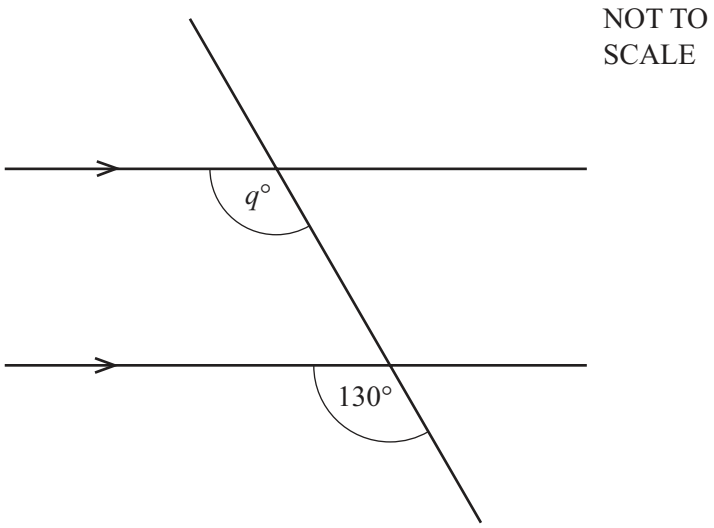


The diagram shows a triangle with one side extended.

Work out the size of angle p.

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

(b)



Work out the size of angle q.
Give a reason for your answer.

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

..... [2]

7 Change 5.6 square centimetres into square millimetres.

Answer ..... mm^2 [1]

---

8 Write the following numbers in standard form.

(a) 346

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

(b) 0.00216

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

---

9 Estimate the answer to the following calculation by rounding each number to 1 significant figure.
Show all your working.

$$\frac{19.4 + 32.96}{0.472}$$

Answer ..... [2]

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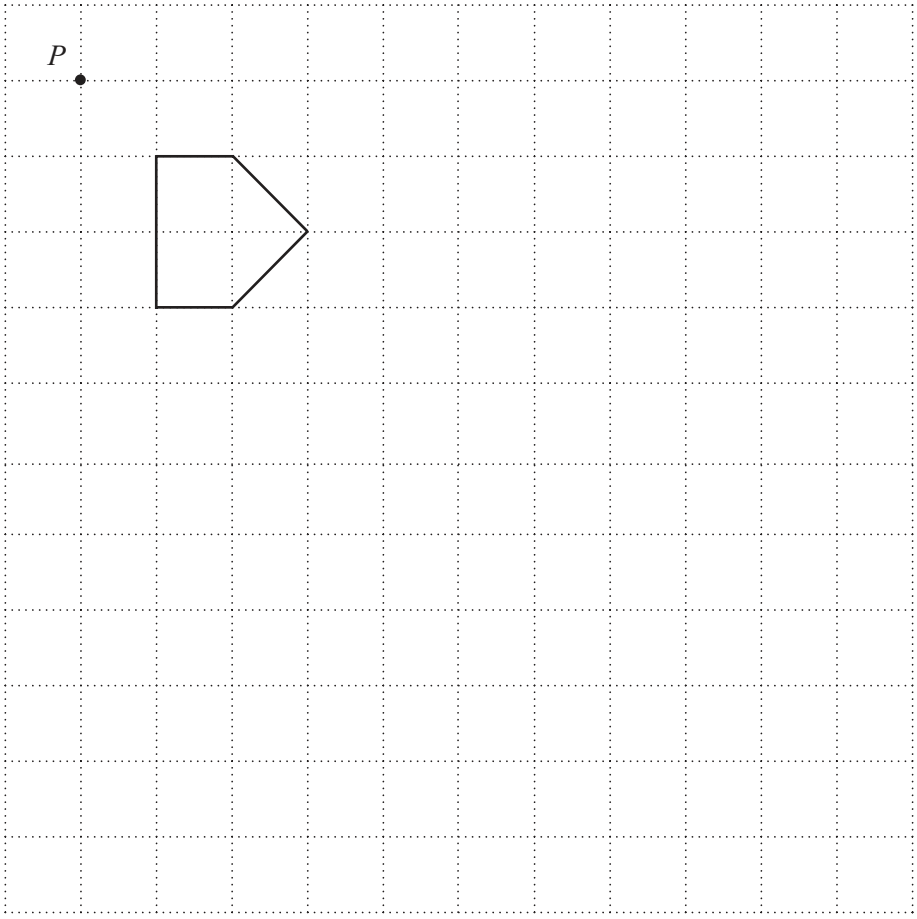
10 Draw the enlargement of the pentagon, centre P, scale factor 3.



[2]

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11 Peter is x years old.
Jane is 4 years older than Peter.

Write down an expression, in terms of x, for Jane's age.

Answer ..... [1]

---

12 Make r the subject of this formula.

$$A = 4\pi r^2$$

Answer $r =$ ..... [2]

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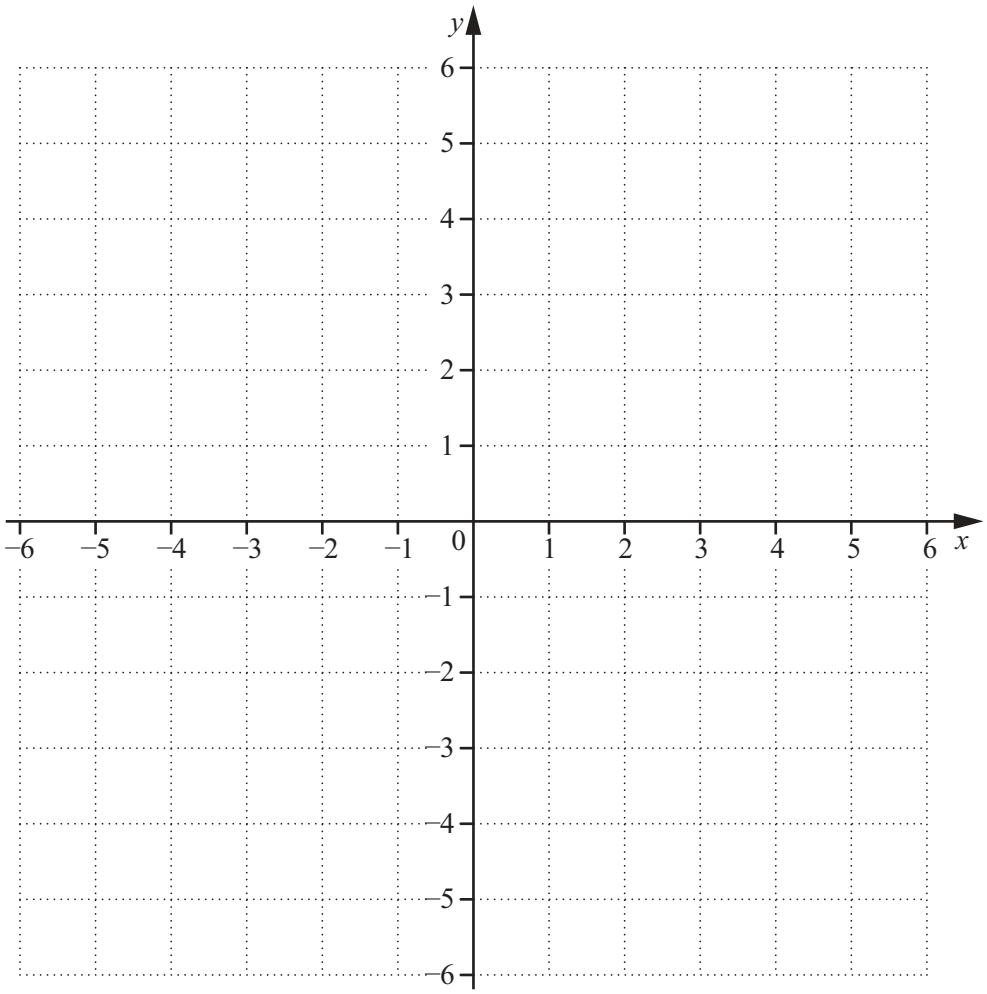
13 Solve the following simultaneous equations.

$$6x + 10y = 26$$
$$2x + 5y = 12$$

Answer $x =$ .....

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

14



(a) On the grid, plot the points $A(-3, 3)$ and $B(5, -3)$. [2]

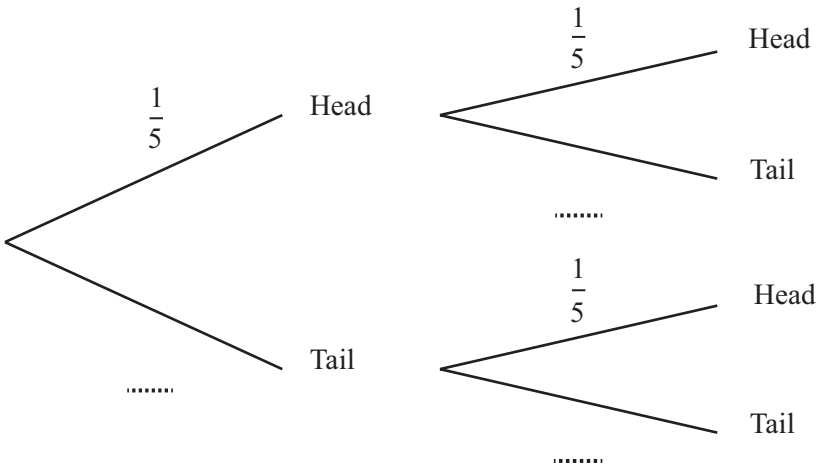
(b) Find the gradient of the line AB.

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

15 A biased coin is spun two times.

The probability of the coin showing a head is $\frac{1}{5}$.

(a) Complete the tree diagram.

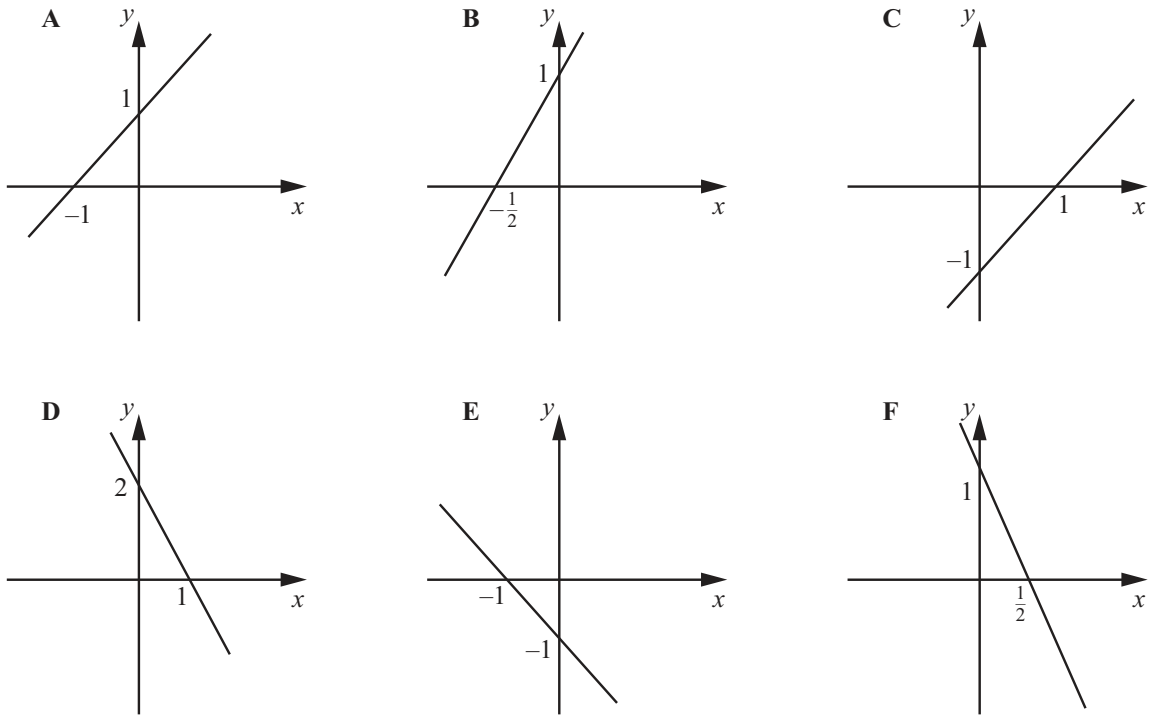


[1]

(b) Find the probability of the coin showing a head both times.

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

16



Write down the letter of the diagram that shows

(a) $y = -x - 1$,

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

(b) $y = 2x + 1$.

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

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