



Cambridge International Examinations
Cambridge International General Certificate of Secondary Education

CANDIDATE NAME

CENTRE NUMBER

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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.

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]

2 Write down the five factors of 16.

Answer [2]

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

How much change does Joe get from \$5?

Answer \$ [2]

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

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

Answer(a) [1]

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

Find the first three terms of this sequence.

Answer(b) , , [2]

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

Find 2 5 1 1 4 7 1 3 1 4

- (a) the range,

Answer(a) [1]

- (b) the median,

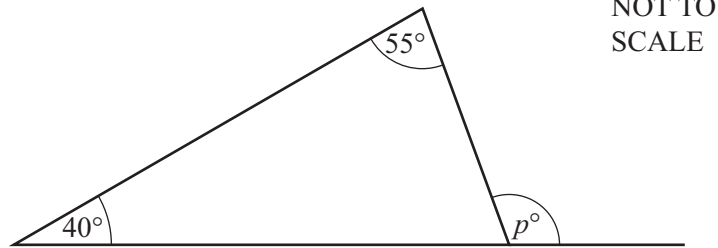
Answer(b) [2]

- (c) the mean.

Answer(c) [2]

5

6 (a)

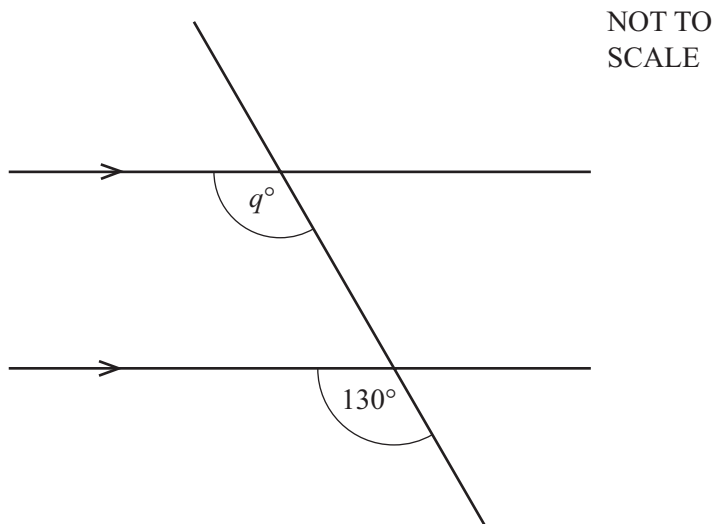


The diagram shows a triangle with one side extended.

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 mm² [1]

8 Write the following numbers in standard form.

(a) 346

Answer(a) [1]

(b) 0.00216

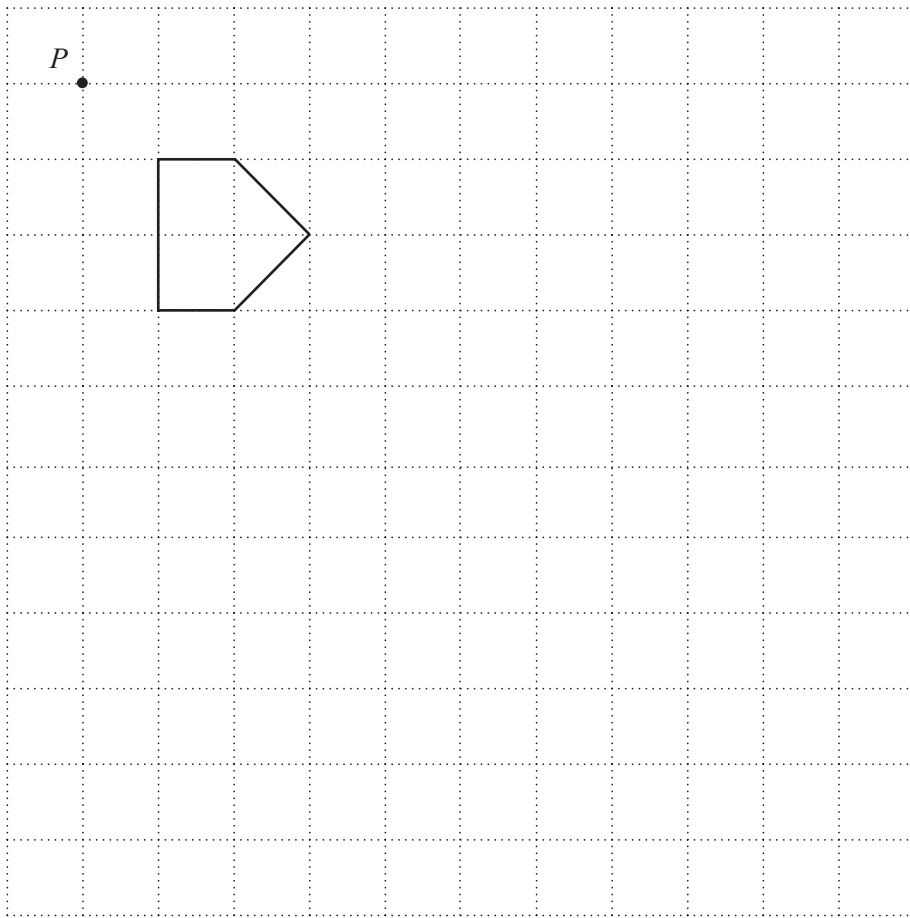
Answer(b) [1]

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]

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



[2]

- 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]

13 Solve the following simultaneous equations.

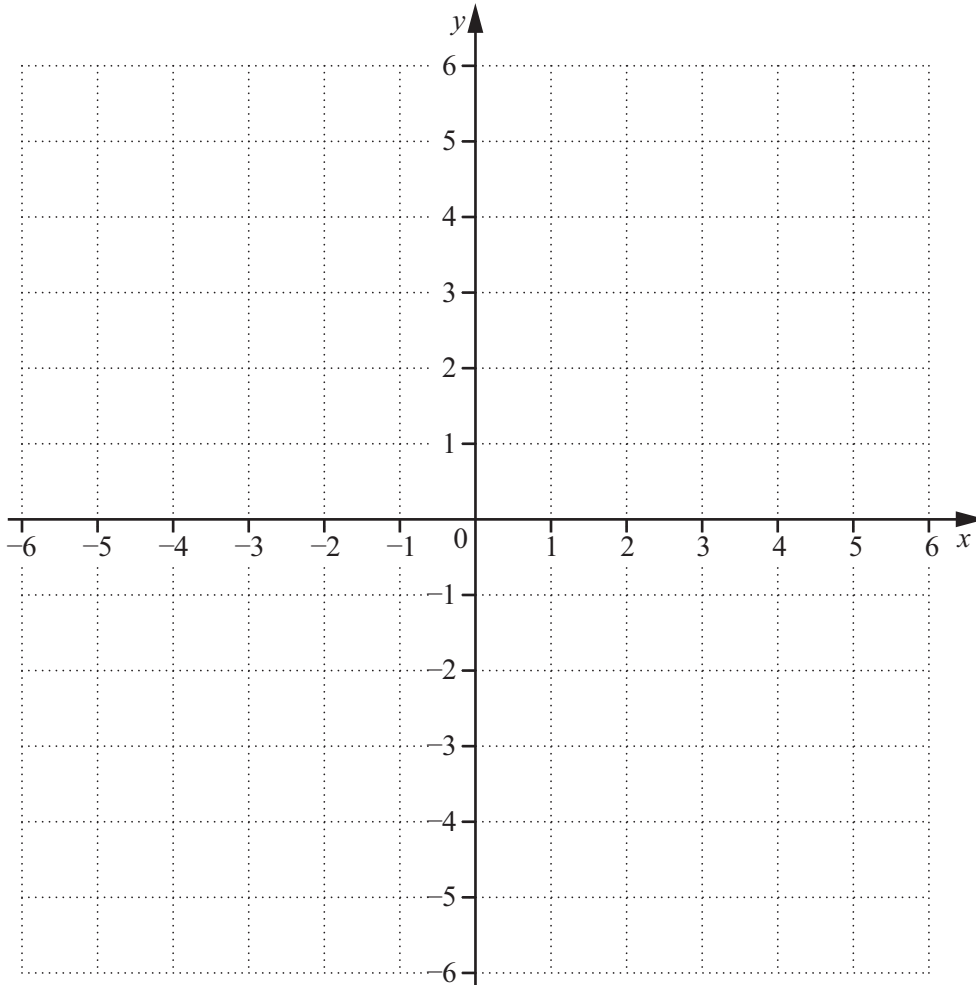
$$6x + 10y = 26$$

$$2x + 5y = 12$$

Answer $x =$

$y =$ [3]

14



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

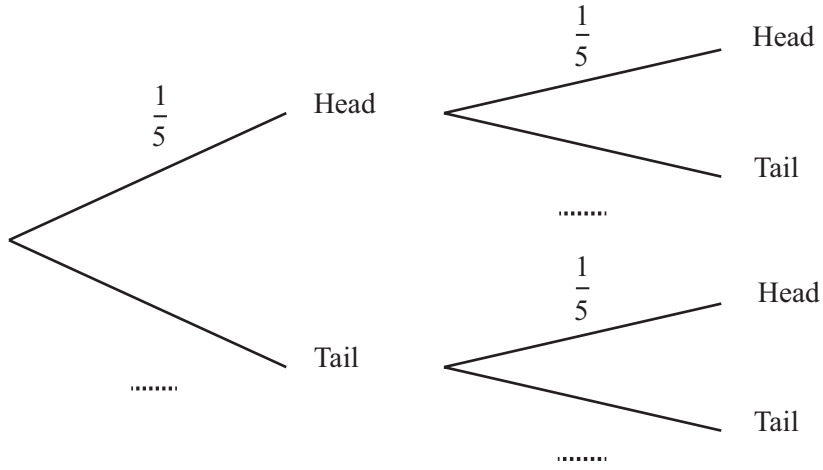
(b) Find the gradient of the line AB .

Answer(b)

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.

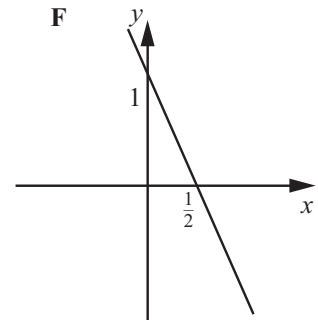
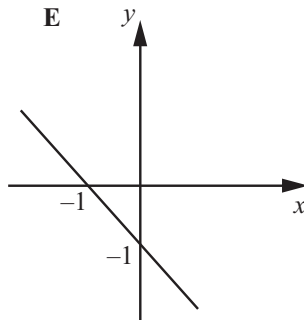
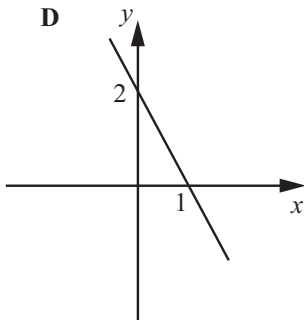
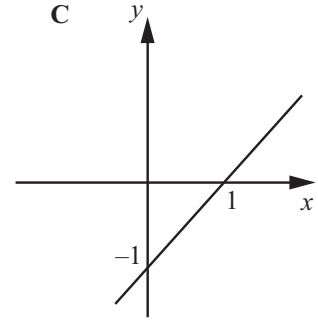
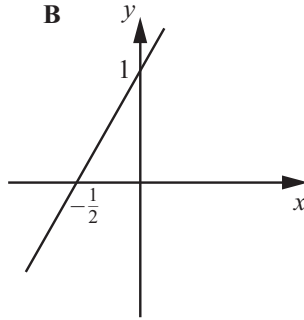
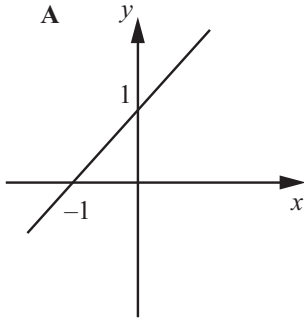


[1]

(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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