Cambridge Assessment International Education

Cambridge IGCSE®

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CAMBRIDGE INTERNATIONAL MATHEMATICS **0607/01**

Paper 1 (Core) **For examination from 2020**

SPECIMEN PAPER **45 minutes**

You must answer on the question paper.

You will need: Geometrical instruments

INSTRUCTIONS

- Answer **all** questions.
- Use a black or dark blue pen. You may use an HB pencil for any diagrams or graphs.
- Write your name, centre number and candidate number in the boxes at the top of the page.
- Write your answer to each question in the space provided.
- Do **not** use an erasable pen or correction fluid.
- Do **not** write on any bar codes.
- Calculators must **not** be used in this paper.
- You must show all necessary working clearly and you will be given marks for correct methods even if your answer is incorrect.
- All answers should be given in their simplest form.

INFORMATION

- The total mark for this paper is 40.
- The number of marks for each question or part question is shown in brackets [ ].

This document has **12** pages. Blank pages are indicated.

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) $23 - 6 \times 3$

..... [1]

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

..... [1]

2 Write down the five factors of 16.

..... [2]

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

How much change does Joe get from $5?

$ ..... [2]

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

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

..... [1]

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

Find the first three terms of this sequence.

..... , ... , ... [2]

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,

..... [1]

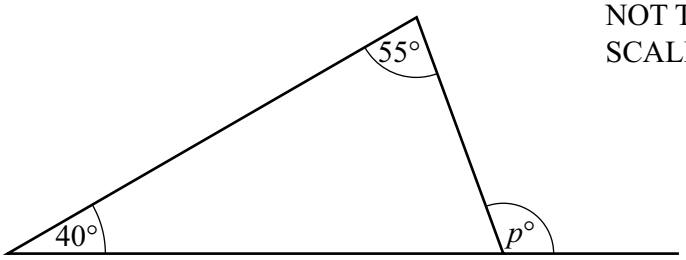
(b) the median,

..... [2]

(c) the mean.

..... [2]

6 **(a)**

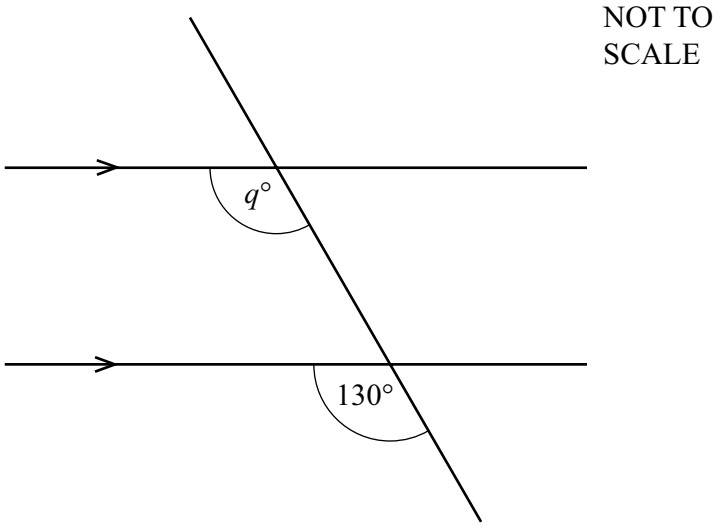


The diagram shows a triangle with one side extended.

Work out the size of angle p.

$p =$ ..... [2]

(b)



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

$q =$ ..... because .....

..... [2]

7 Change 5.6 square centimetres into square millimetres.

..... mm^2 [1]

8 Write the following numbers in standard form.

(a) 346

..... [1]

(b) 0.00216

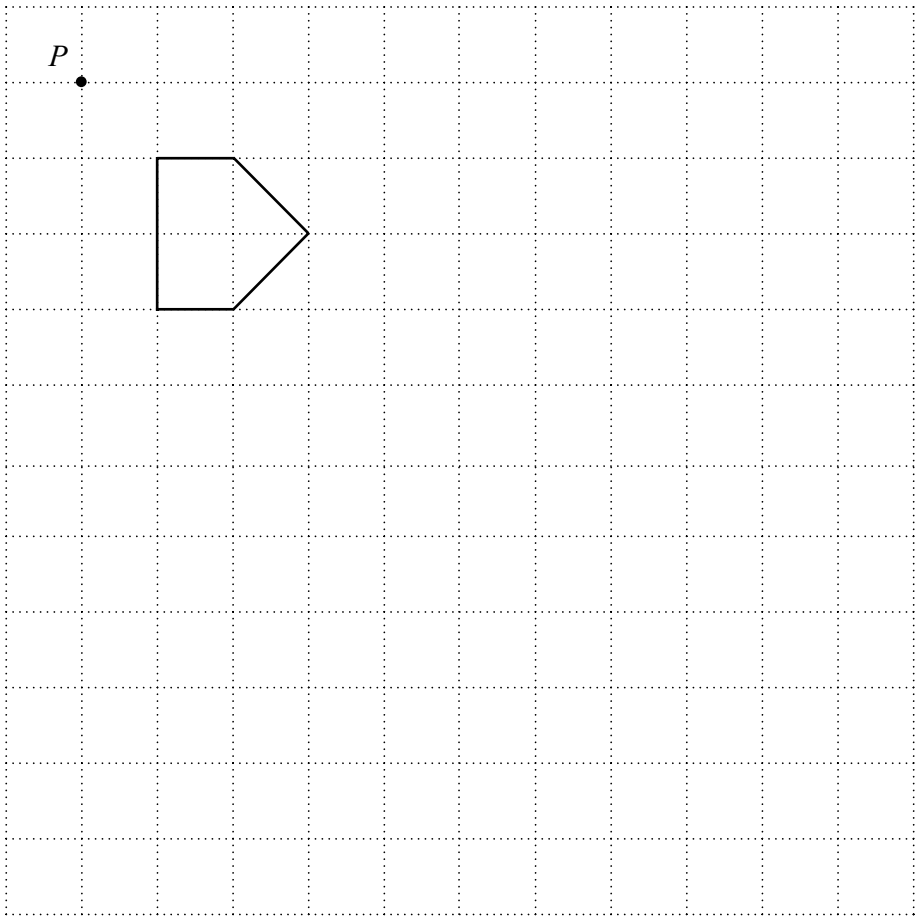
..... [1]

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

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

..... [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.

..... [1]

12 Make r the subject of this formula.

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

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

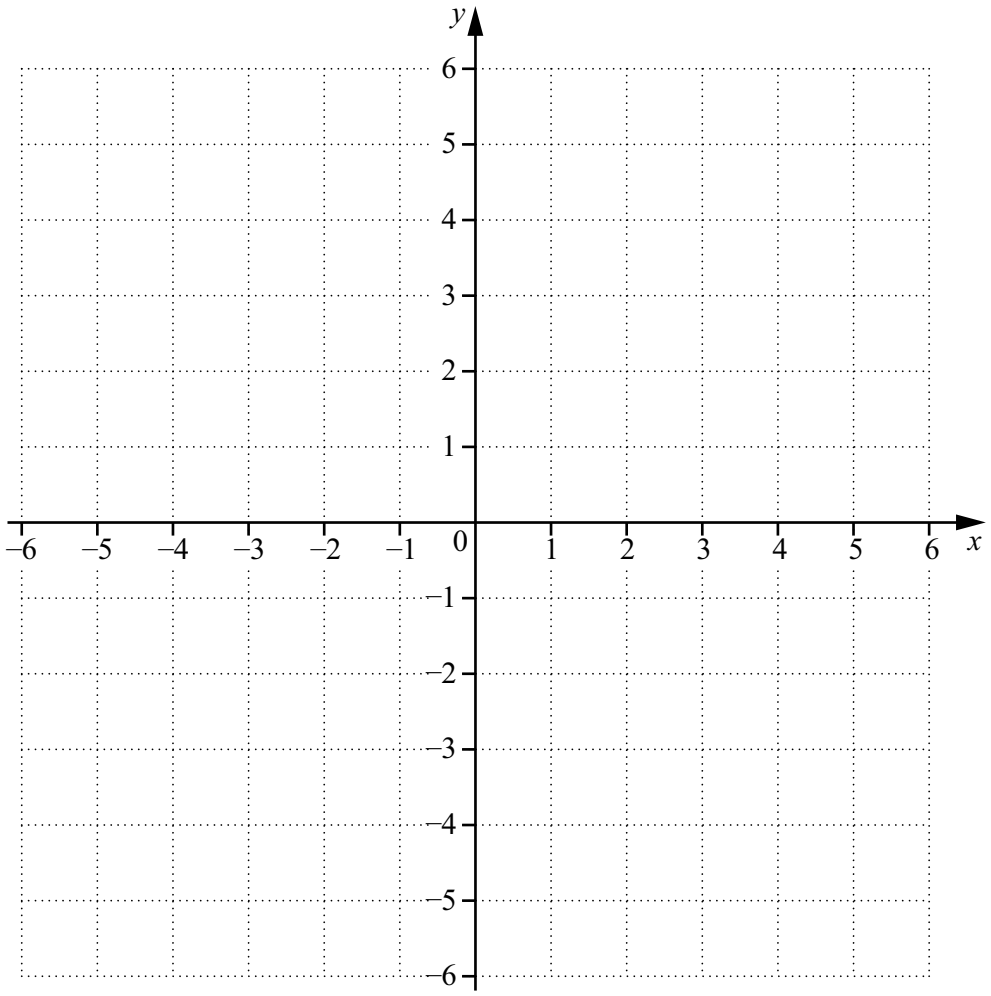
13 Solve the simultaneous equations.

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

$x =$ .....

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

14



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

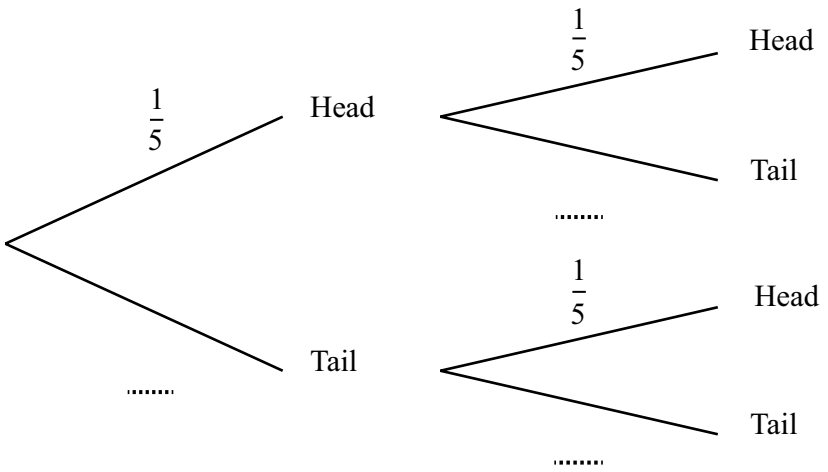
(b) Find the gradient of the line AB.

..... [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.



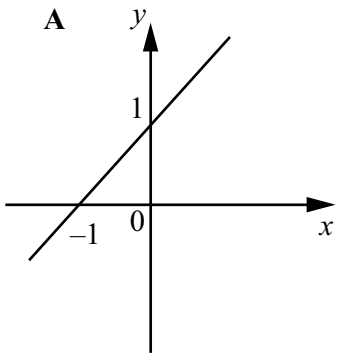
[1]

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

..... [2]

16

A



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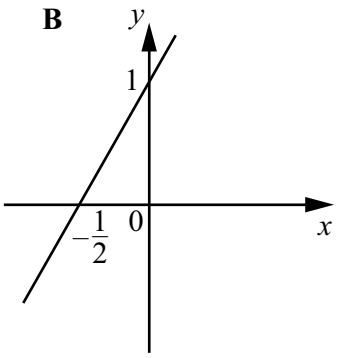

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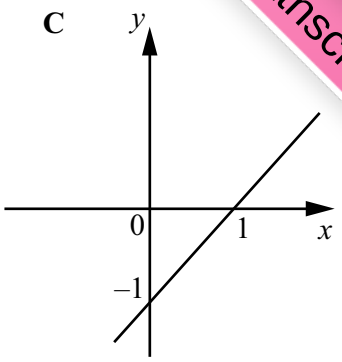

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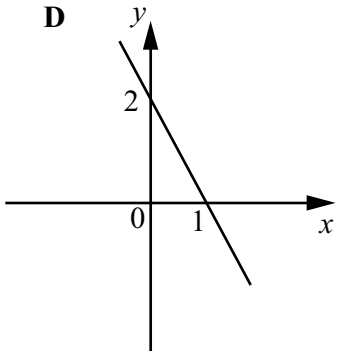

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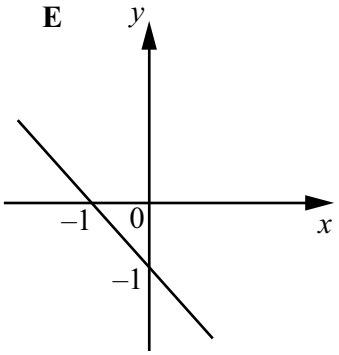

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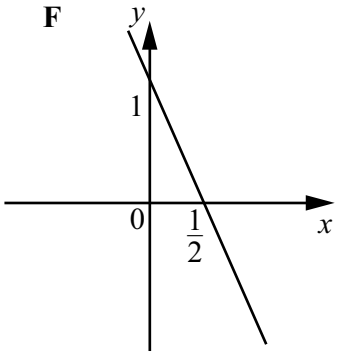

Write down the letter of the diagram that shows

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

..... [1]

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

..... [1]

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