



**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.

**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

- 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.

2      5      1      1      4      7      1      3      1      4  
Find

- (a) the range,

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

- (b) the median,

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

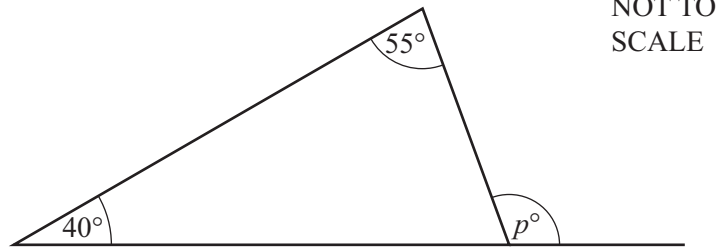
- (c) the mean.

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

---

5

6 (a)

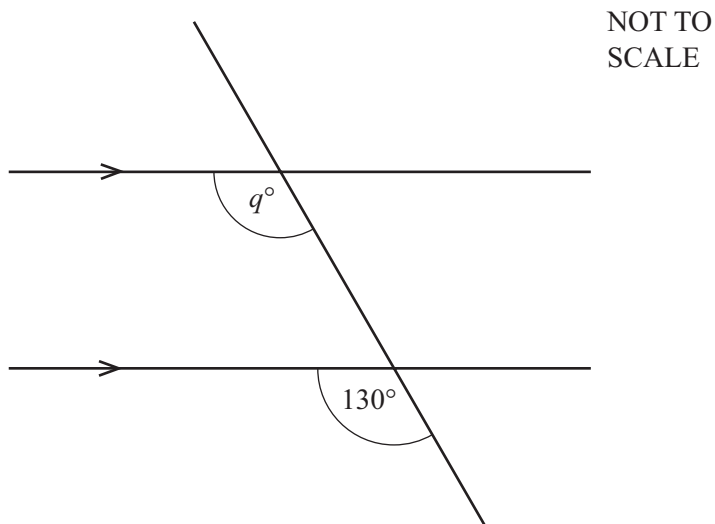


The diagram shows a triangle with one side extended.

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* ..... mm<sup>2</sup> [1]

---

8 Write the following numbers in standard form.

(a) 346

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

(b) 0.00216

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

---

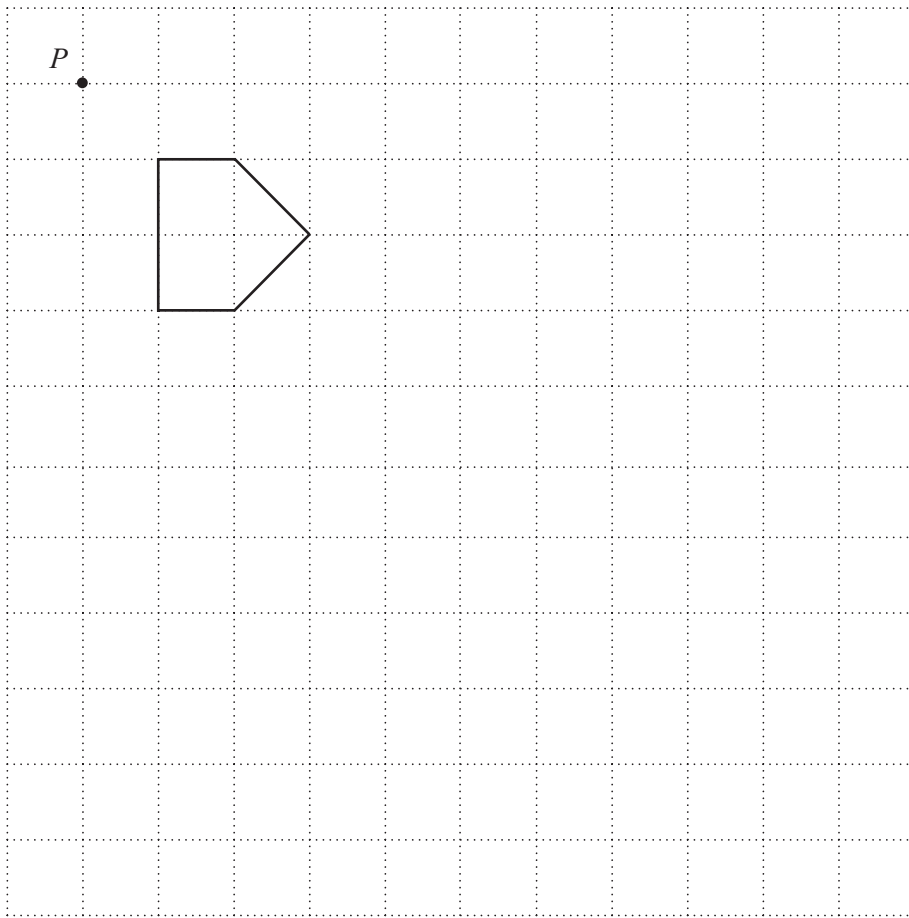
9 Estimate the answer to the following calculation by rounding each number to 1 significant figure.  
**Show all your working.**

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

*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.

$$6x + 10y = 26$$

$$2x + 5y = 12$$

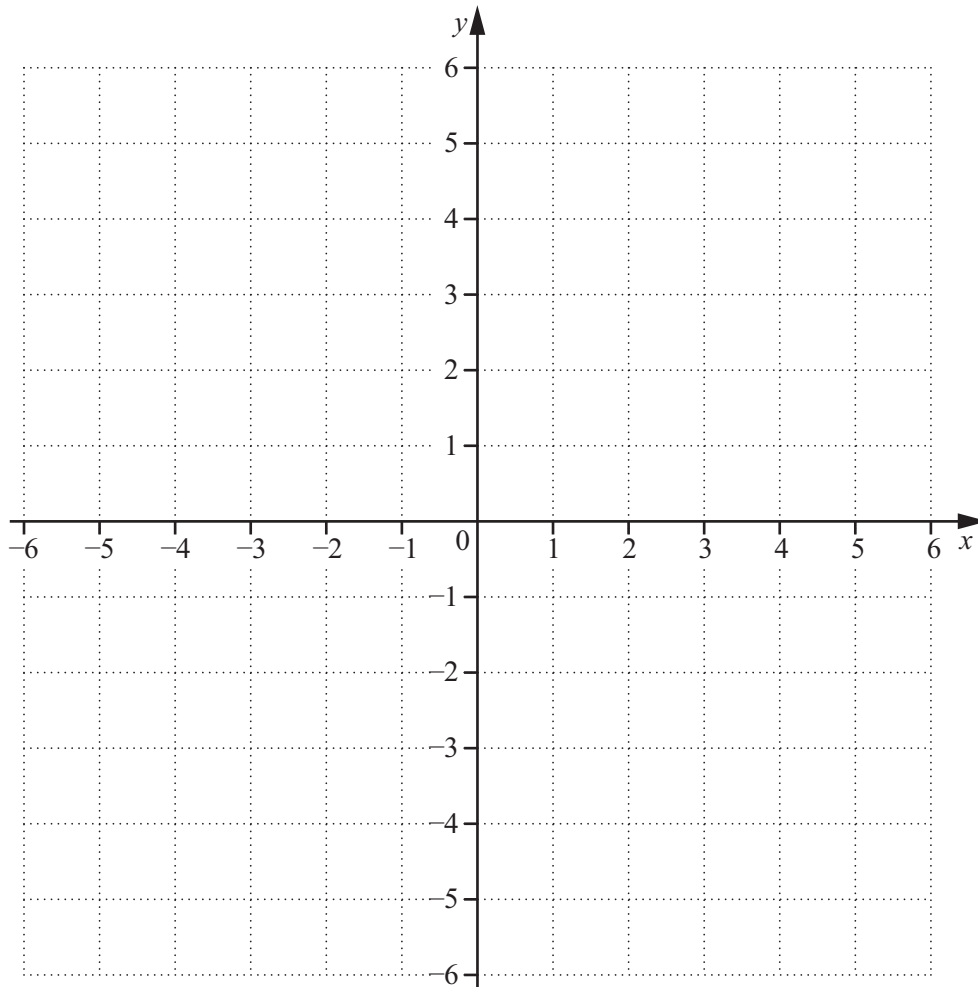
Answer  $x =$  .....

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

---



14



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

(b) Find the gradient of the line  $AB$ .

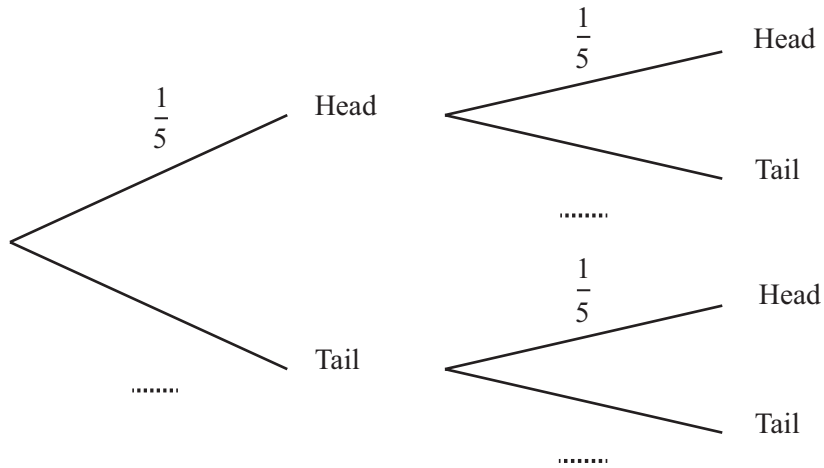
Answer(b) .....

---

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.



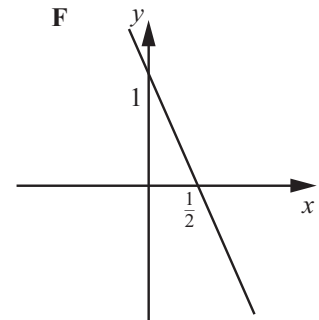
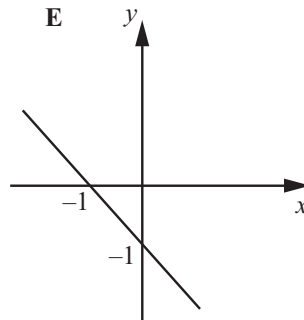
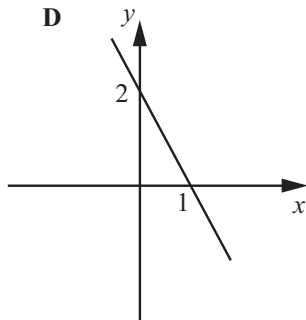
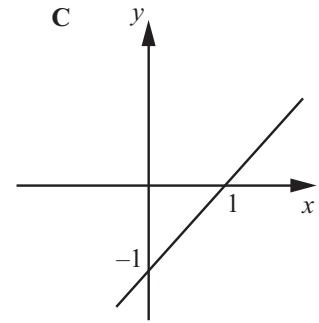
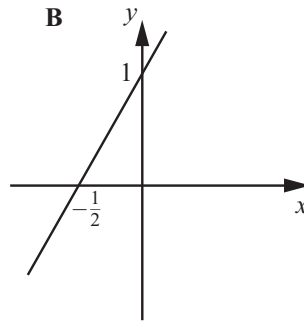
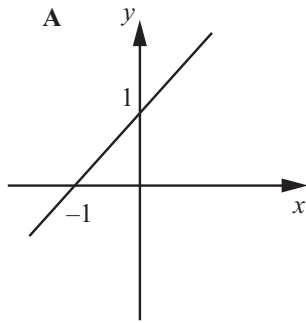
[1]

(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]

**BLANK PAGE**

---

Permission to reproduce items where third-party owned material protected by copyright is included has been sought and cleared where possible. Every reasonable effort has been made by the publisher (UCLES) to trace copyright holders, but if any items requiring clearance have unwittingly been included, the publisher will be pleased to make amends at the earliest possible opportunity.

To avoid the issue of disclosure of answer-related information to candidates, all copyright acknowledgements are reproduced online in the Cambridge International Examinations Copyright Acknowledgements Booklet. This is produced for each series of examinations and is freely available to download at [www.cie.org.uk](http://www.cie.org.uk) after the live examination series.

Cambridge International Examinations is part of the Cambridge Assessment Group. Cambridge Assessment is the brand name of University of Cambridge Local Examinations Syndicate (UCLES), which is itself a department of the University of Cambridge.