

# **Mock Grade 4**

## **Maths**

## **Booklet 4**

Paper 1H

Non-Calculator

[www.ggmaths.co.uk](http://www.ggmaths.co.uk)

**Answer ALL questions.**

**Write your answers in the spaces provided.**

**You must write down all the stages in your working.**

- 1** The first five terms of an arithmetic sequence are

1      4      7      10      13

Write down an expression, in terms of  $n$ , for the  $n$ th term of this sequence.

.....  
(Total for Question 1 is 2 marks)

- 2** Show that

$$2\frac{1}{3} \times 3\frac{3}{4} = 8\frac{3}{4}$$

(Total for Question 2 is 3 marks)

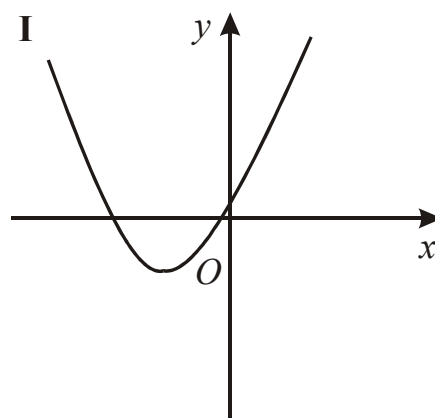
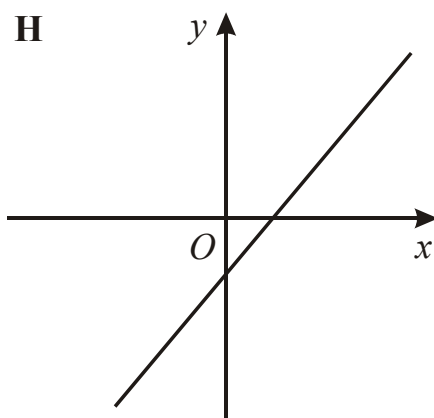
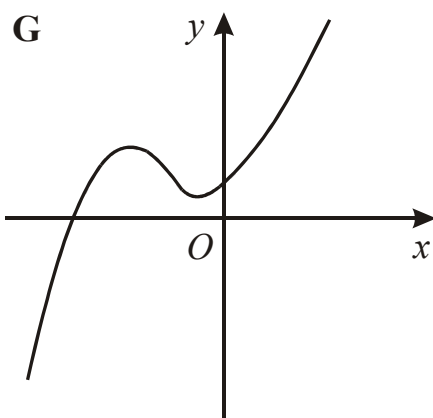
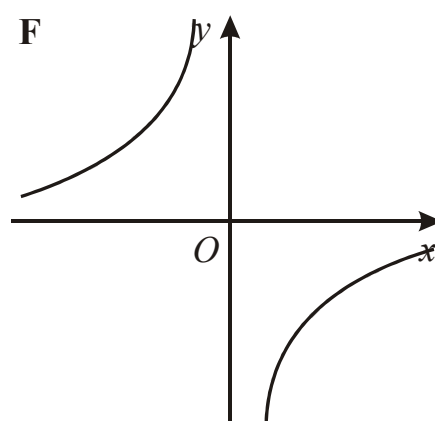
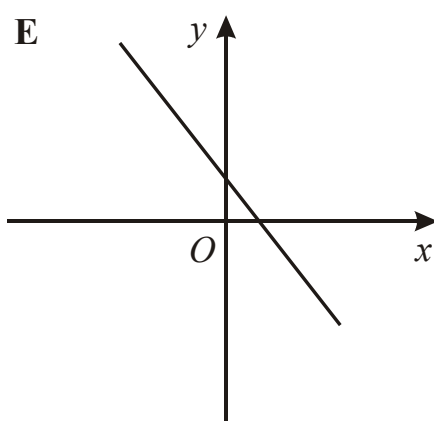
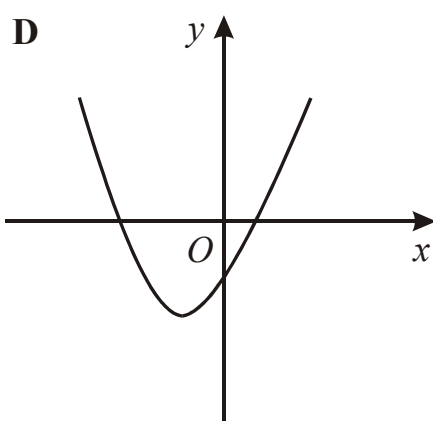
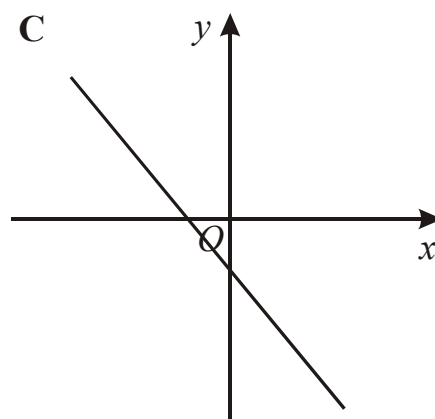
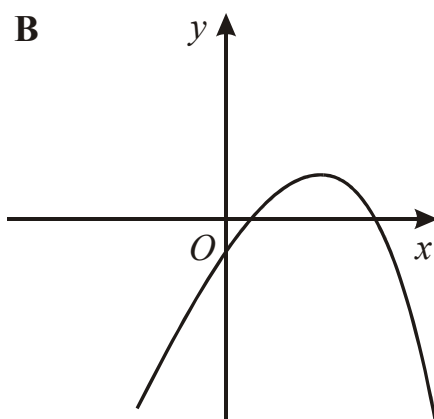
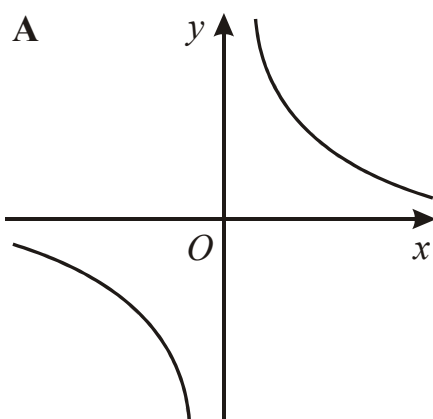
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3 Here are nine graphs.



Write down the letter of the graph that could have the equation:

(i)  $y = 3x - 2$

.....  
(1)

(ii)  $y = 2x^2 - 5x - 3$

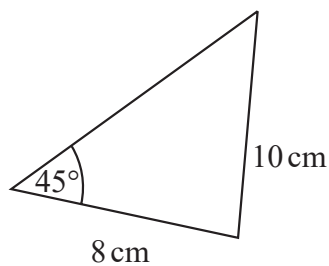
.....  
(1)

(iii)  $y = \frac{3}{x}$

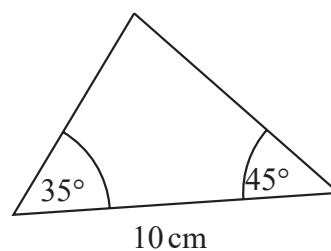
.....  
(1)

(Total for Question 3 is 3 marks)

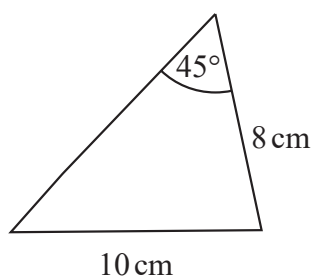
- 4 The diagram shows four triangles.



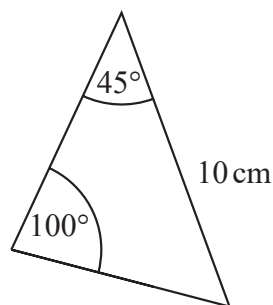
Triangle A



Triangle B



Triangle C



Triangle D

Two of these triangles are congruent.

Write down the letters of these two triangles.

..... and .....

(Total for Question 4 is 1 mark)

- 5 Sean pays £15 for 30 chocolate bars.

He sells all 30 chocolate bars for 90p each.

Work out Sean's percentage profit.

..... %

(Total for Question 5 is 3 marks)

**6** Write 180 as a product of its prime factors.

.....  
**(Total for Question 6 is 2 marks)**

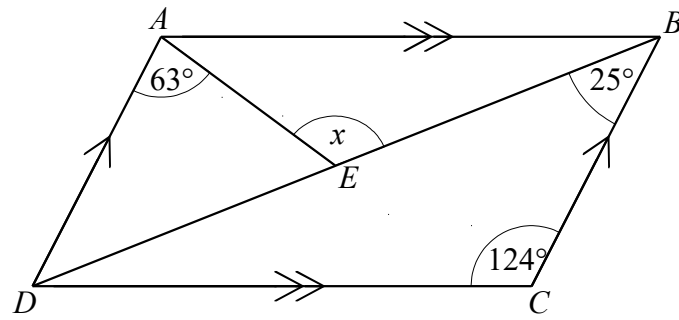
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- 7 Kiaria is 4 years younger than Jay.  
Martha is three times as old as Kiaria.  
The sum of their three ages is 64

Find the ratio of Jay's age to Kiaria's age to Martha's age.

.....  
**(Total for Question 7 is 4 marks)**

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$ABCD$  is a parallelogram.

Angle  $DAE = 63^\circ$

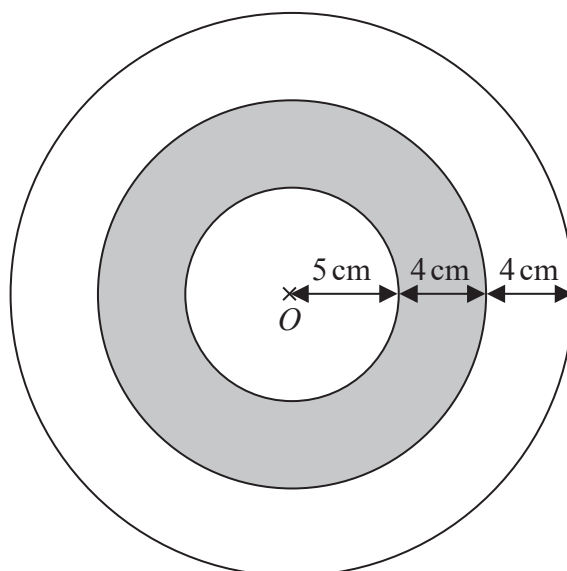
Angle  $BCD = 124^\circ$

Angle  $CBD = 25^\circ$

Calculate the size of angle  $x$ .

Give reasons for each stage of your answer.

- 9 The diagram shows a logo made from three circles.



Each circle has centre  $O$ .

Daisy says that exactly  $\frac{1}{3}$  of the logo is shaded.

Is Daisy correct?

You must show all your working.

(Total for Question 9 is 4 marks)