

# **GCSE Grade 4**

## **Maths**

## **Booklet 3**

Paper 2H  
Calculator

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

Answer ALL questions.

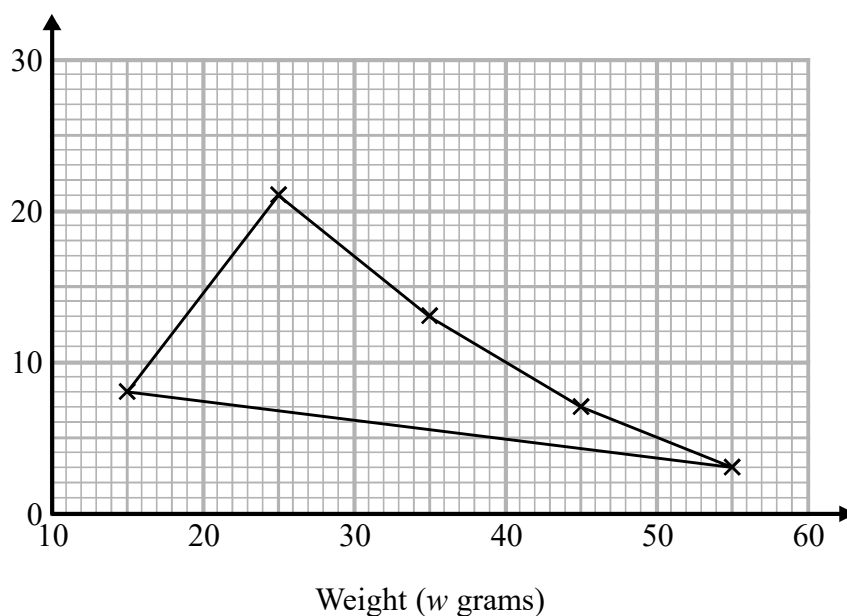
Write your answers in the spaces provided.

You must write down all the stages in your working.

- 1 The table shows some information about the weights of 50 potatoes.

Weight ( $w$ grams)	Frequency
$10 < w \leq 20$	6
$20 < w \leq 30$	21
$30 < w \leq 40$	13
$40 < w \leq 50$	7
$50 < w \leq 60$	3

Iveta drew this frequency polygon for the information in the table.  
The frequency polygon is **not** fully correct.



Write down **two** things that are wrong with the frequency polygon.

- 1.....  
.....  
2.....  
.....

(Total for Question 1 is 2 marks)

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DO NOT WRITE IN THIS AREA



- 2 The length of a pencil is 128 mm correct to the nearest millimetre.

Complete the error interval for the length of the pencil.

..... mm  $\leq$  length  $<$  ..... mm

(Total for Question 2 is 2 marks)

- 3 Tom and Adam have a total of 240 stamps.

The ratio of the number of Tom's stamps to the number of Adam's stamps is 3 : 7

Tom buys some stamps from Adam.

The ratio of the number of Tom's stamps to the number of Adam's stamps is now 3 : 5

How many stamps does Tom buy from Adam?

You must show all your working.

(Total for Question 3 is 4 marks)



- 4 Each person in a fitness club is going to get a free gift.  
Stan is going to order the gifts.

Stan takes a sample of 50 people in the fitness club.  
He asks each person to tell him the gift they would like.

The table shows information about his results.

Gift	Number of people
sports bag	17
gym towel	7
headphones	11
voucher	15

There are 700 people in the fitness club.

- (i) Work out how many sports bags Stan should order.

.....  
(2)

- (ii) Write down any assumption you made **and** explain how this could affect your answer.

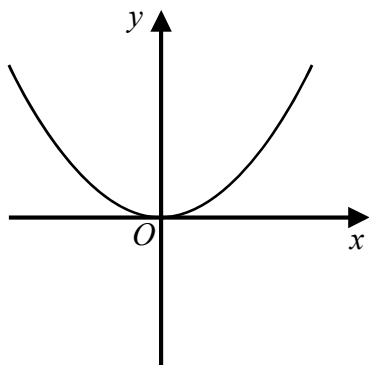
.....  
.....  
.....  
.....  
(1)

(Total for Question 4 is 3 marks)

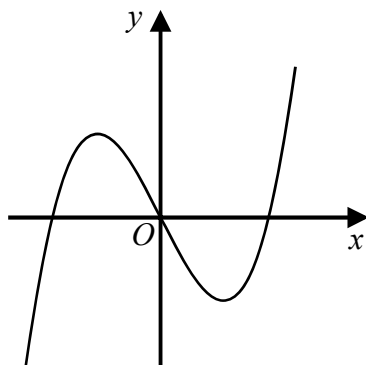


5 Here are six graphs.

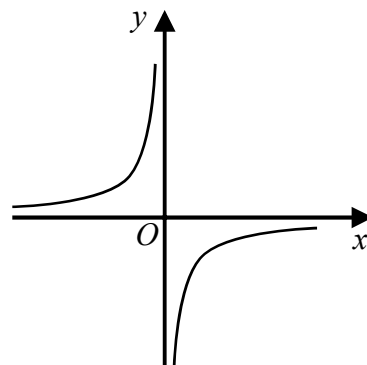
A



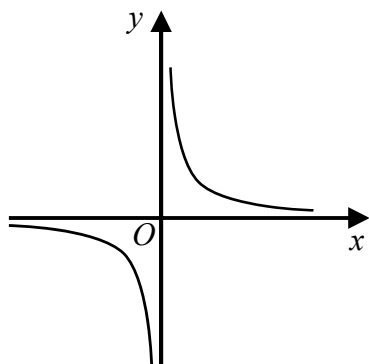
B



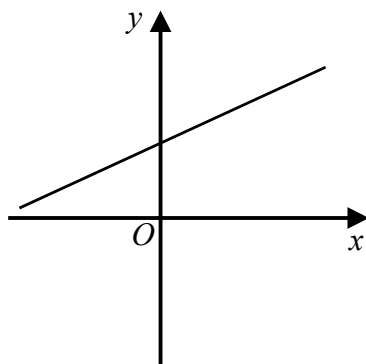
C



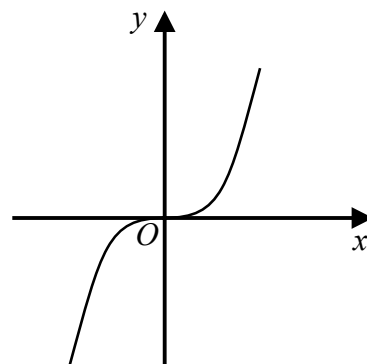
D



E



F



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

(a)  $y = x^3$

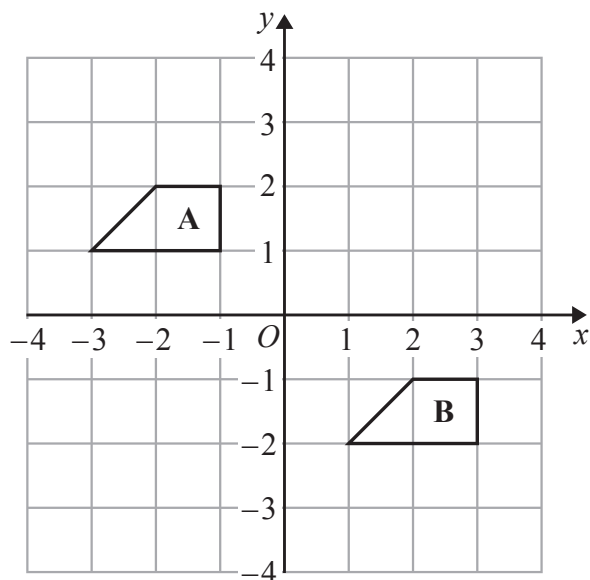
.....  
(1)

(b)  $y = \frac{1}{x}$

.....  
(1)

(Total for Question 5 is 2 marks)

6



Describe the single transformation that maps shape A onto shape B.

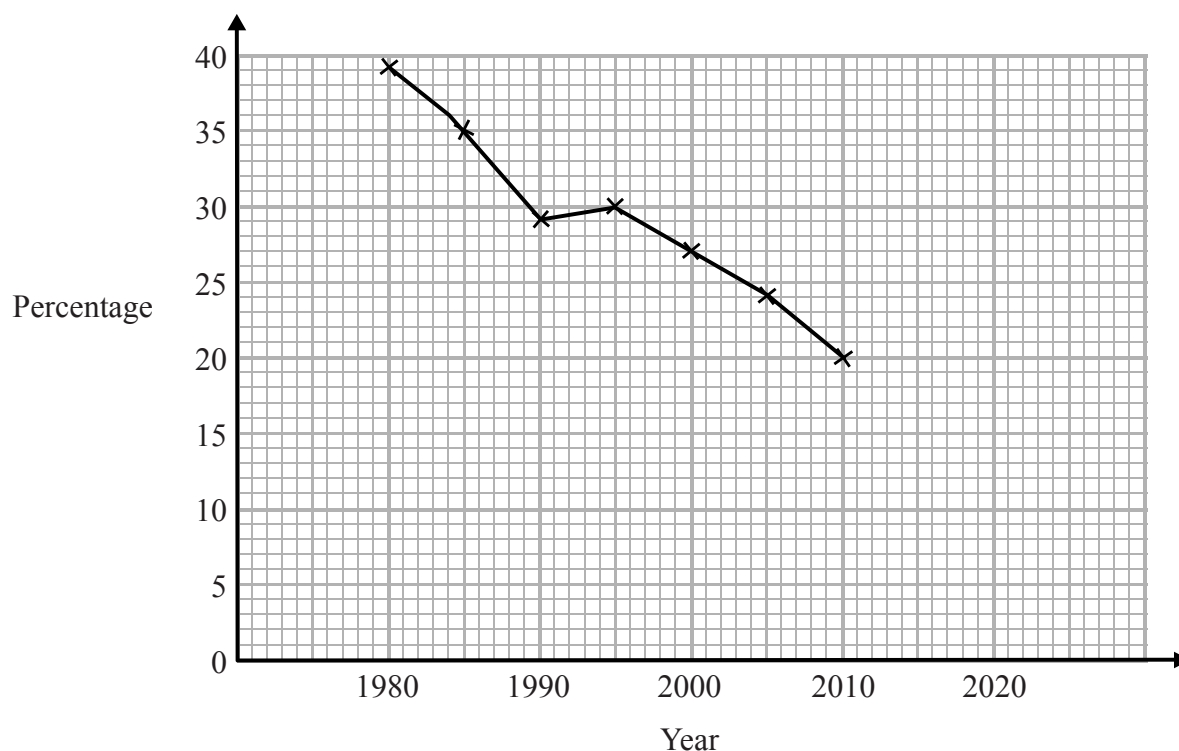
(Total for Question 6 is 2 marks)

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- 7 The time series graph shows information about the percentages of the people in a village that used the village shop for the years between 1980 and 2010



- (a) Describe the trend in the percentage of the people in the village who used the shop for this period.

(1)

- (b) (i) Use the graph to predict the percentage of the people in the village likely to use the shop in the year 2020

.....%

- (ii) Is your prediction reliable?  
Explain your answer.

(3)

(Total for Question 7 is 4 marks)

8 (a) Expand and simplify  $3(y - 2) + 5(2y + 1)$

.....  
(2)

(b) Simplify  $5u^2w^4 \times 7uw^3$

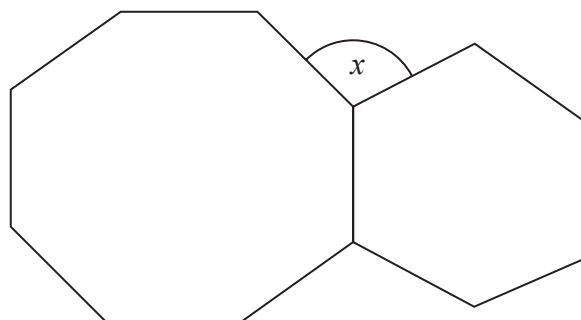
.....  
(2)

(Total for Question 8 is 4 marks)

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9



The diagram shows a regular octagon and a regular hexagon.

Find the size of the angle marked  $x$

You must show all your working.

$x =$  .....

(Total for Question 9 is 3 marks)