



# EXAM PAPERS PRACTICE

GCSE Edexcel Math

1MA1

Transformation of Graph

Question Paper

*"We will help you to  
achieve A Star "*



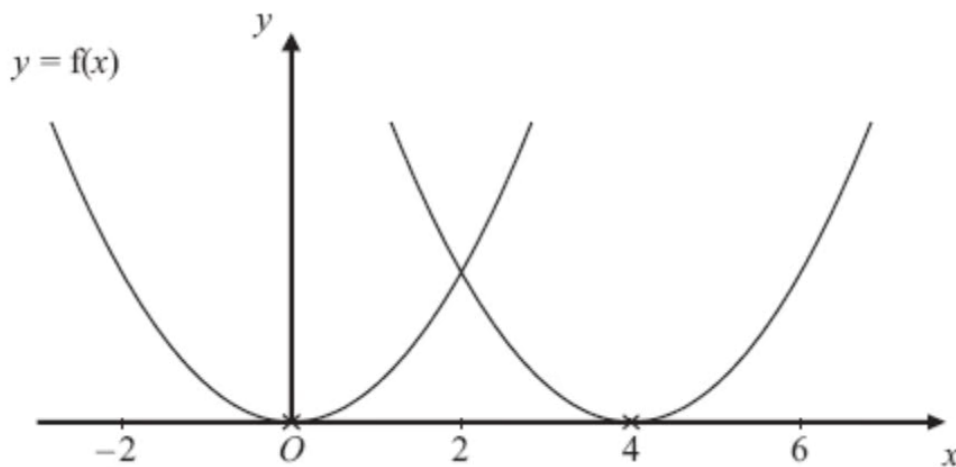
**Question 1**

The curve with equation  $y = f(x)$  is transformed to give the curve with equation  $y = f(x) - 4$

(b) Describe the transformation.

[1 mark]

**Question 2**



The curve with equation  $y = f(x)$  is translated so that the point at  $(0, 0)$  is mapped onto the point  $(4, 0)$ .

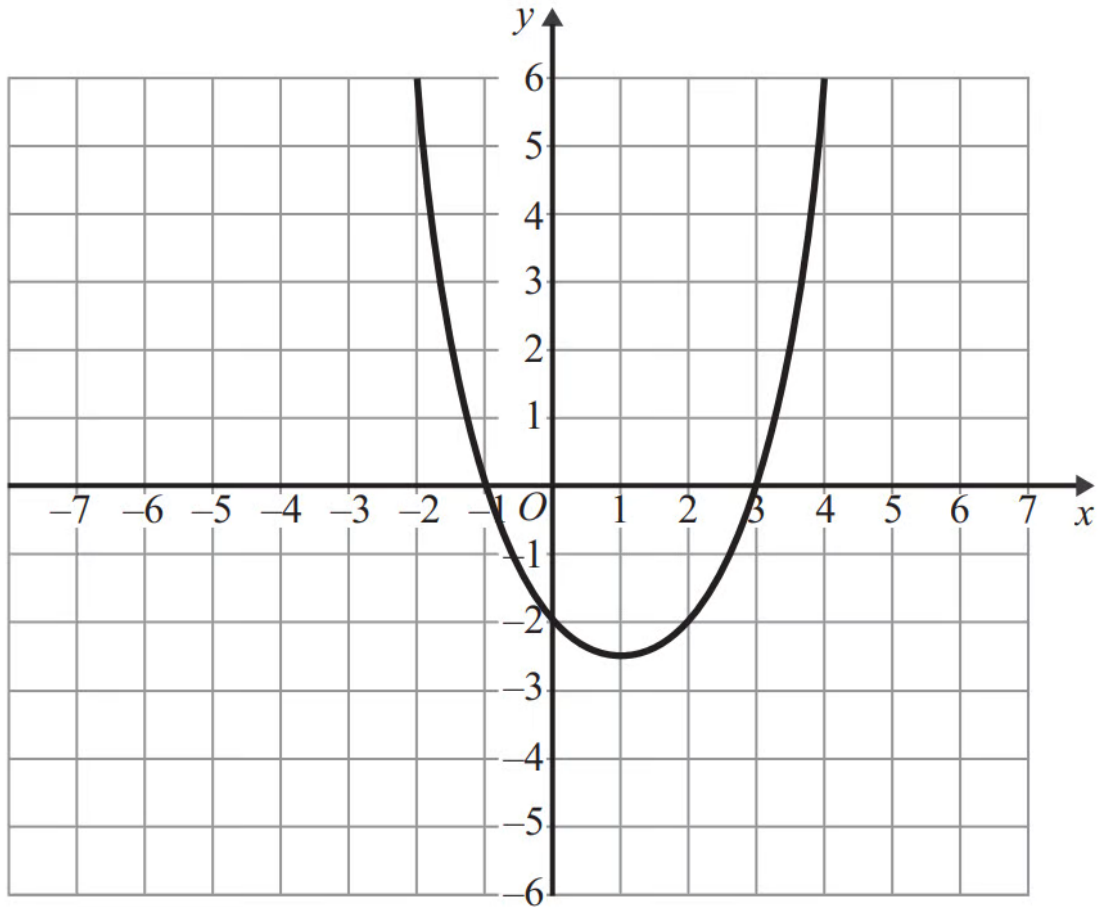
Find an equation of the translated curve.

[2 marks]



**Question 3**

(b) On this grid, sketch the graph of  $y = -f(x)$

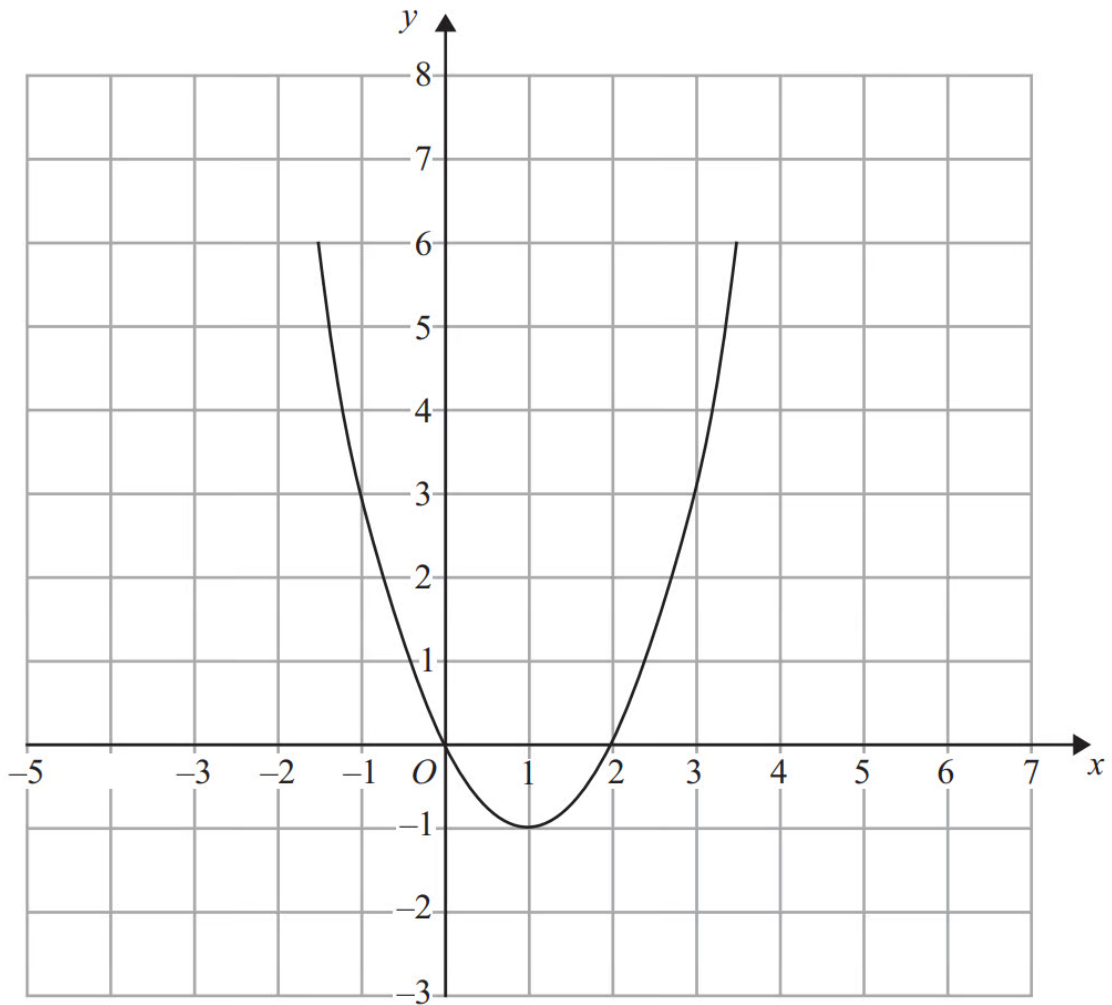


[2 marks]



**Question 4**

(b) On this grid, sketch the graph of  $y = f(-x) + 2$

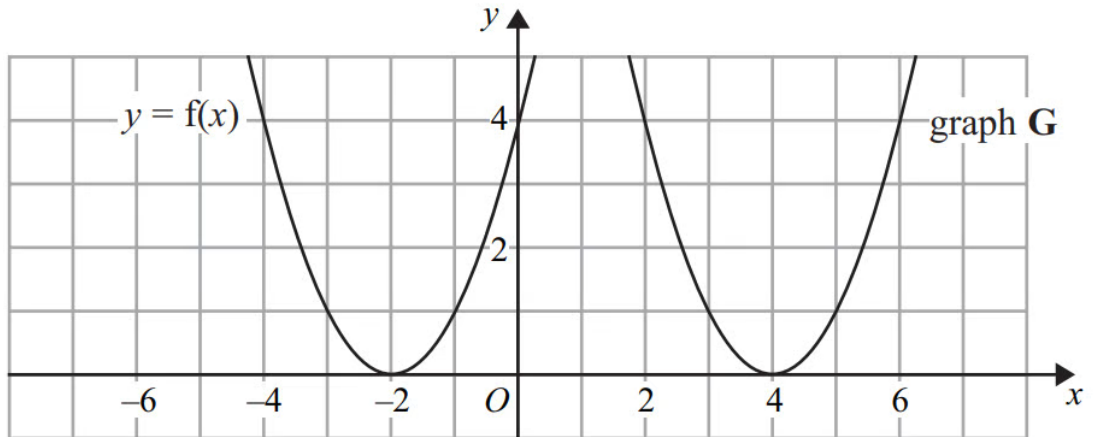


[2 marks]



**Question 5**

The graph of  $y = f(x)$  is shown on the grid.



The graph **G** is a translation of the graph of  $y = f(x)$ .

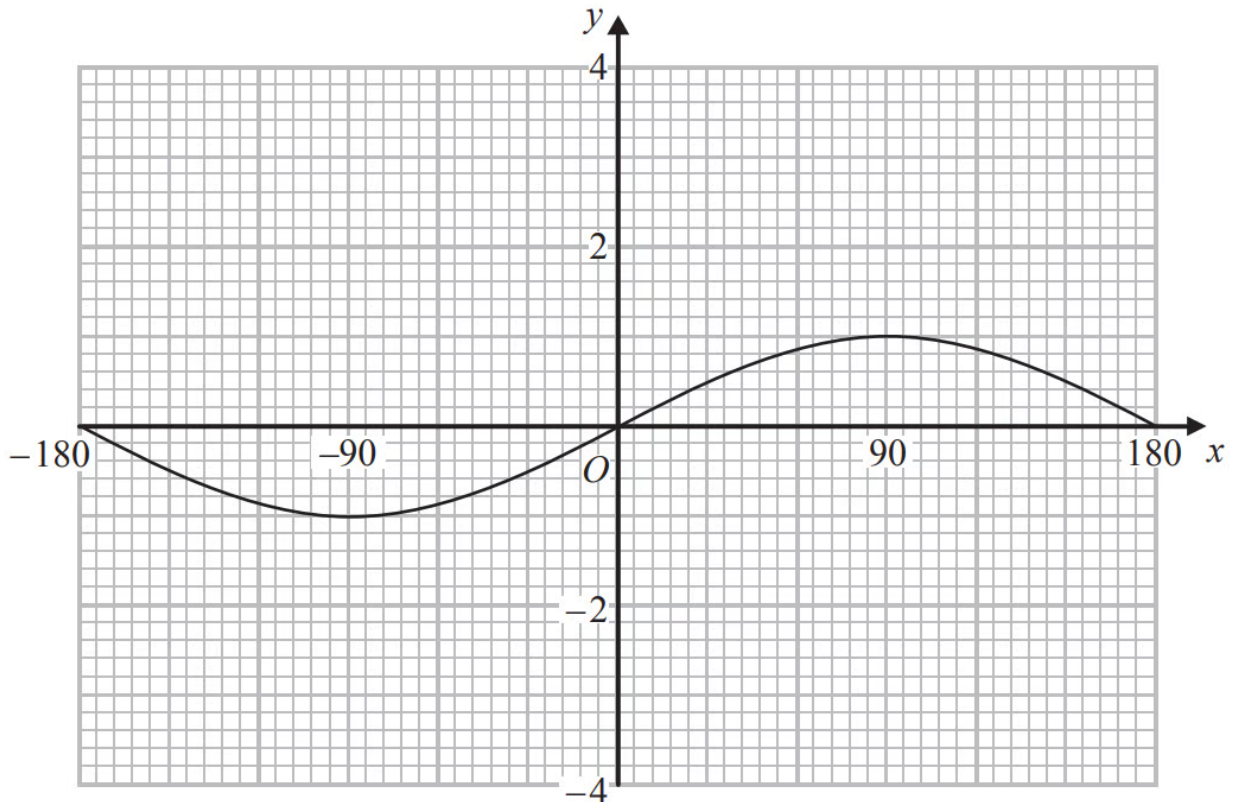
(b) Write down the equation of graph **G**.

[1 mark]



**Question 6**

Here is the graph of  $y = \sin x^\circ$  for  $-180 \leq x \leq 180$



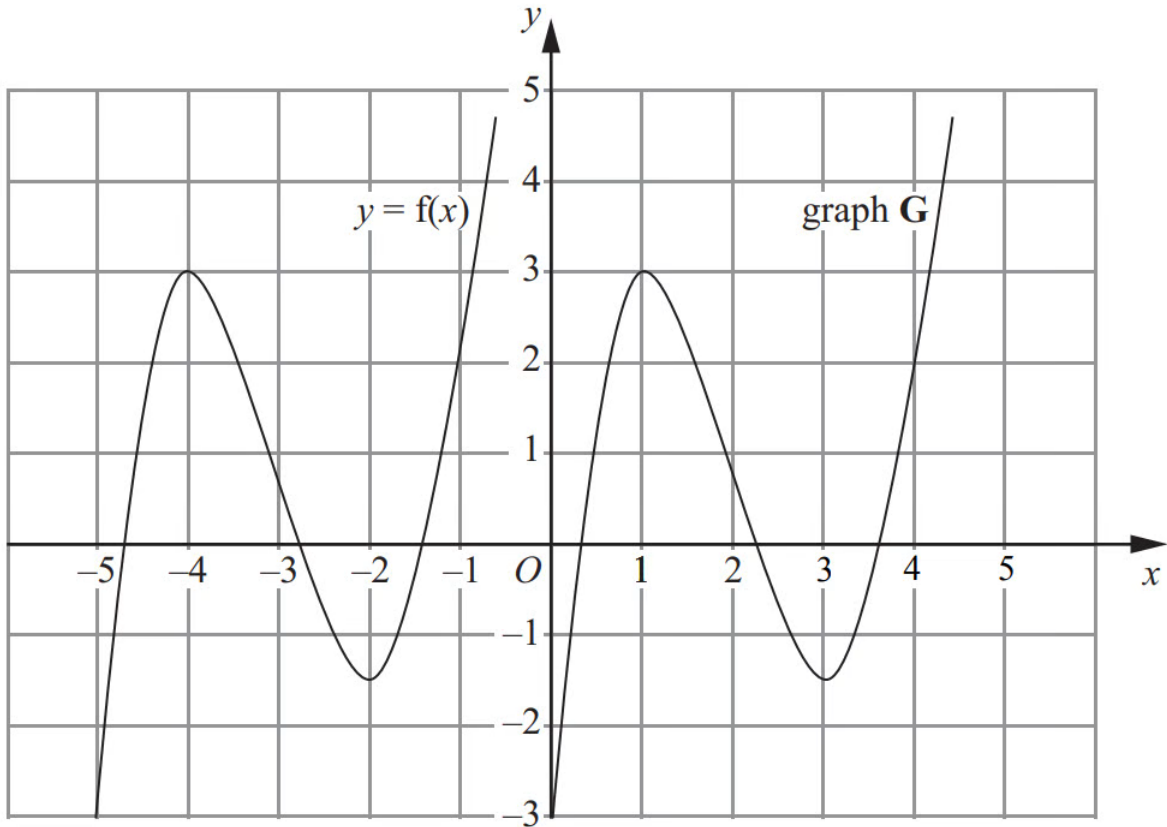
(a) On the grid above, sketch the graph of  $y = \sin x^\circ + 2$  for  $-180 \leq x \leq 180$

[2 marks]



**Question 7**

The graph of  $y = f(x)$  is shown on the grid.



The graph **G** is a translation of the graph of  $y = f(x)$ .

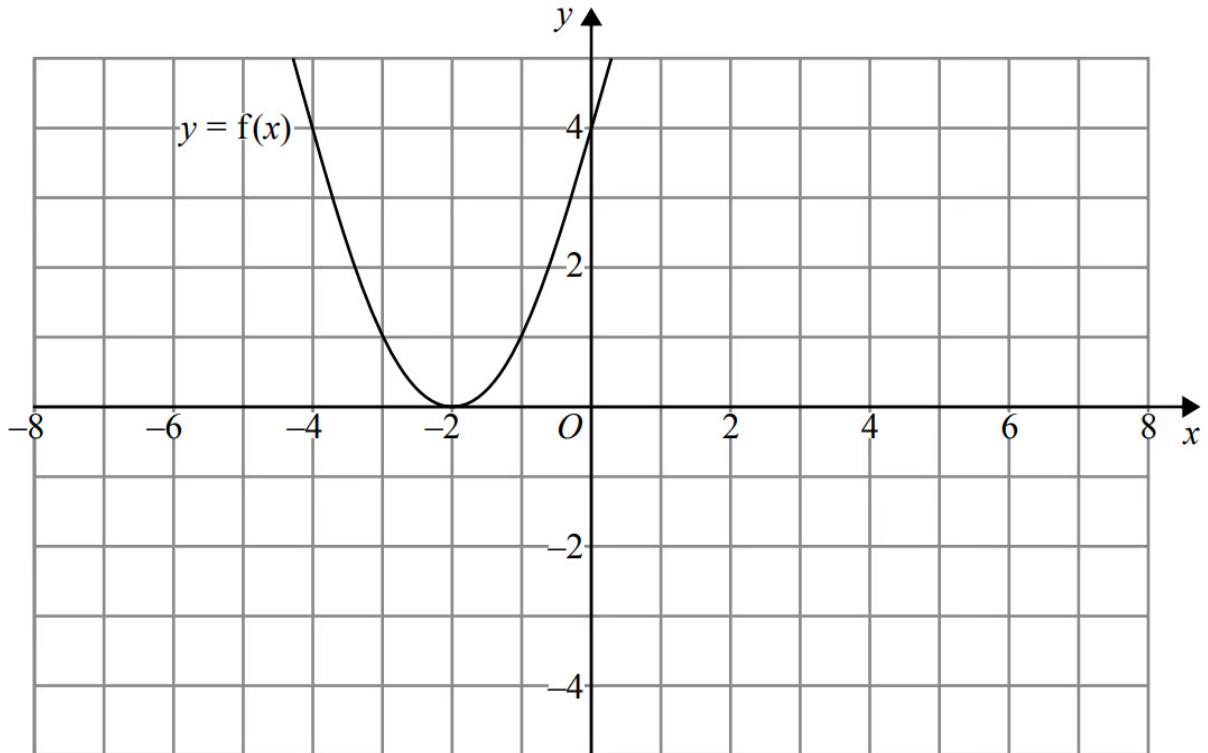
- (a) Write down, in terms of  $f$ , the equation of graph **G**.

[1 mark]



**Question 8**

The graph of  $y = f(x)$  is shown on both grids below.



(a) On the grid above, sketch the graph of  $y = f(-x)$

[1 mark]

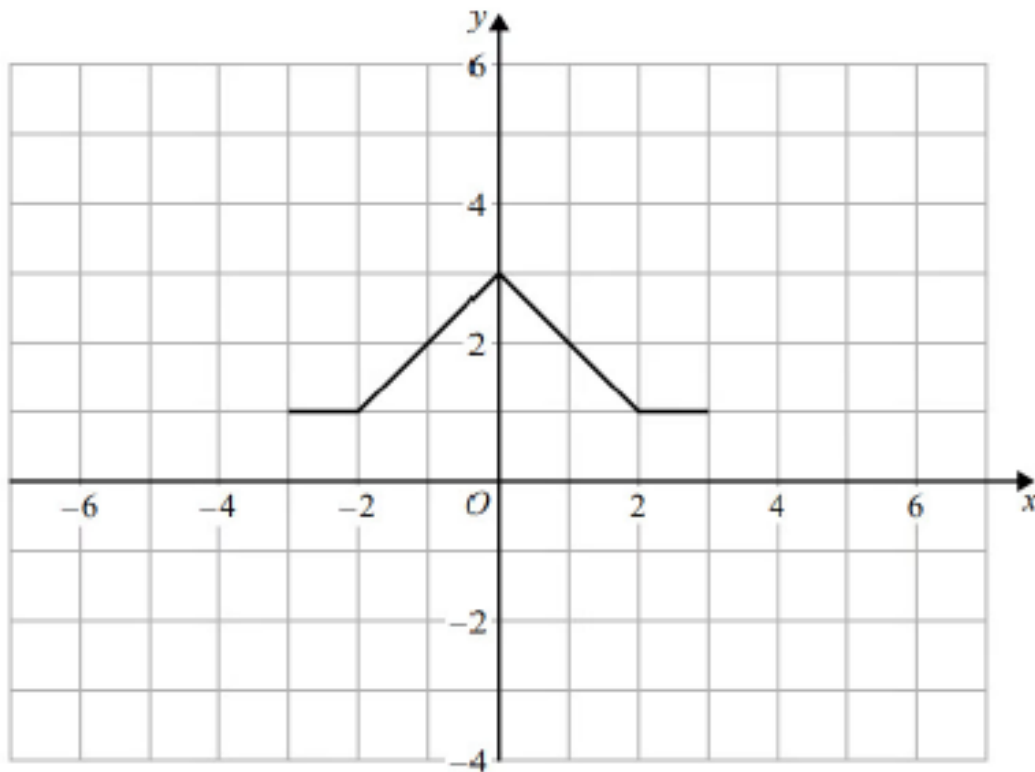




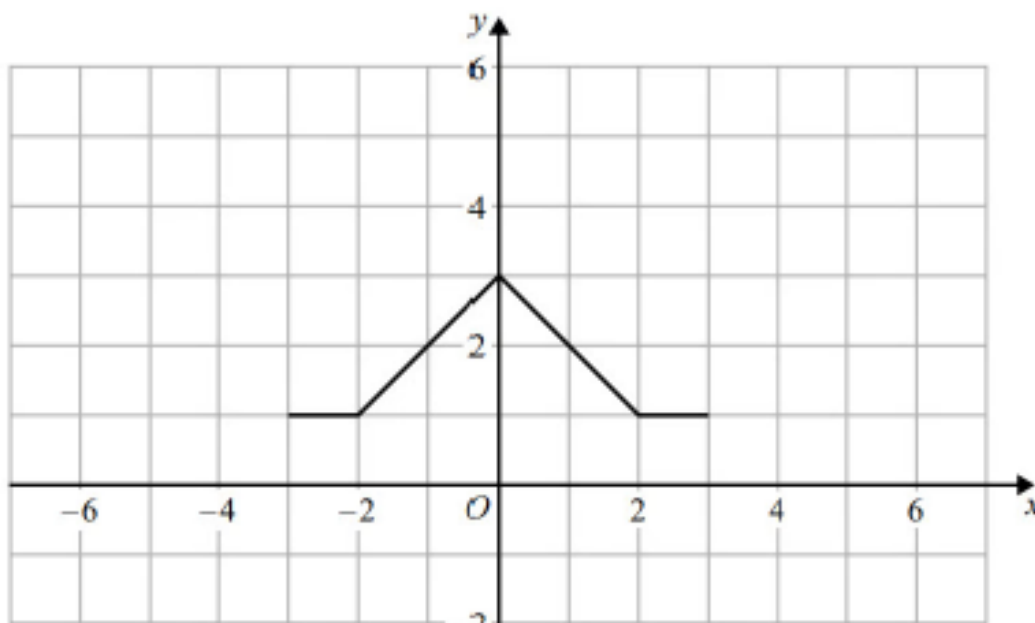
**Question 9**

The graph of  $y = f(x)$  is shown on both grids below.

(i) On this grid, draw the graph of  $y = -f(x)$

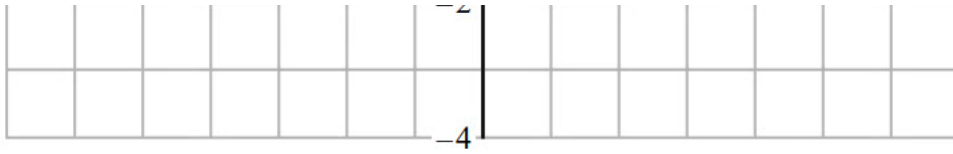


(ii) On the grid below, draw the graph of  $y = f(x - 3)$





## EXAM PAPERS PRACTICE



[2 marks]

### Question 10

- (b) Write down the coordinates of the minimum point of the curve with the equation  $y = f(x + 5) + 6$

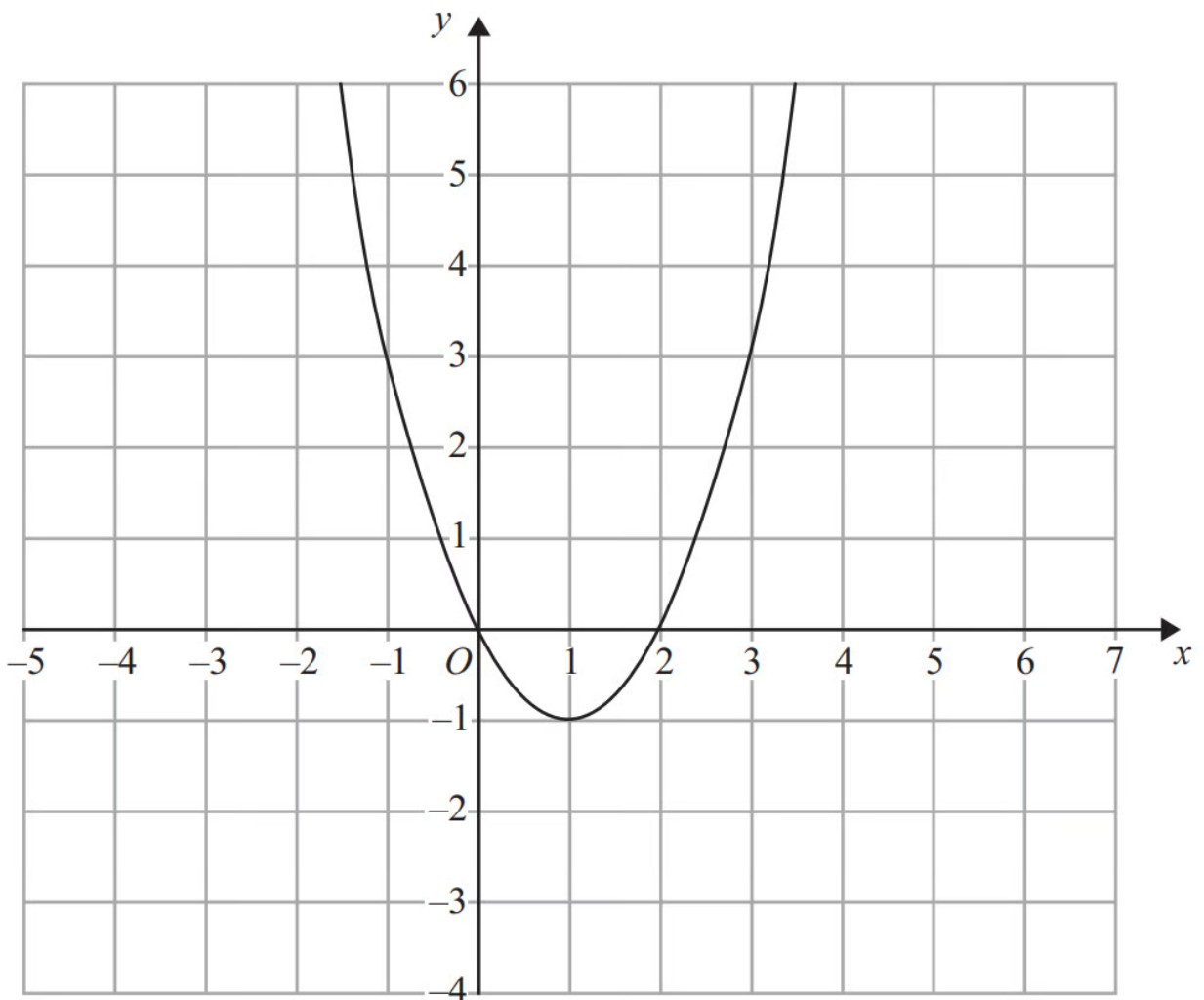
[2 marks]



**Question 11**

The graph of  $y = f(x)$  is shown on each of the grids.

(a) On this grid, sketch the graph of  $y = f(x - 3)$



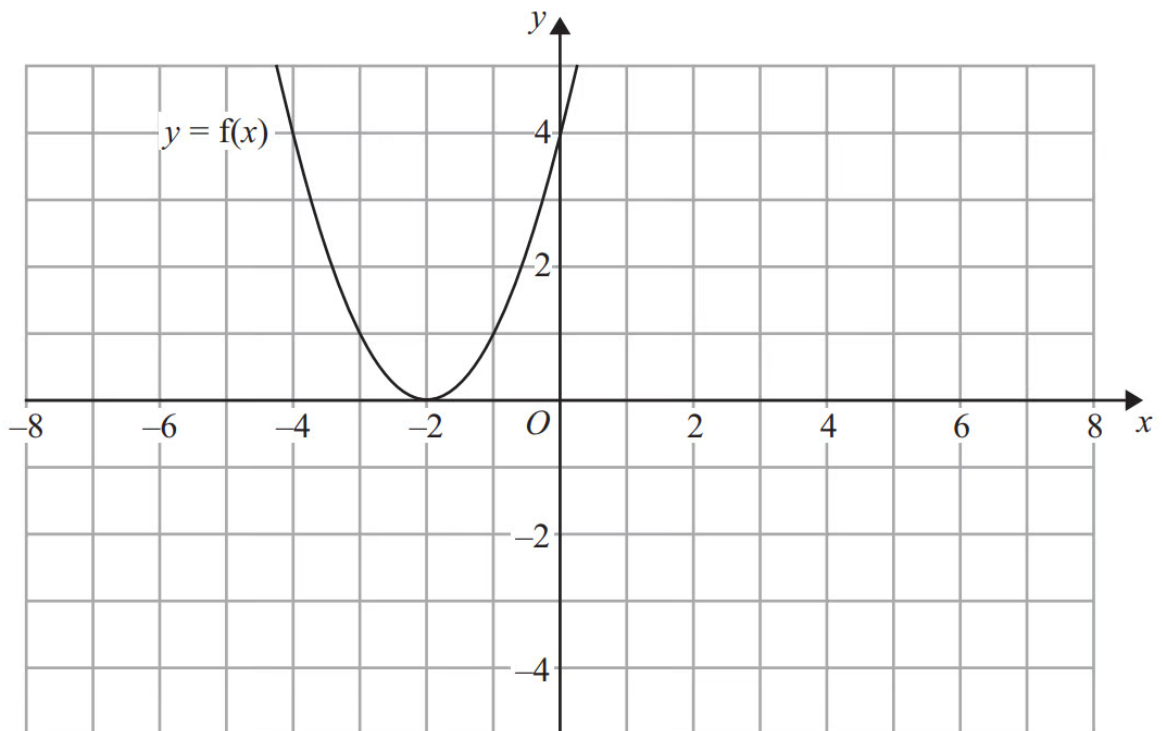
[2 marks]



**Question 12**

$$y = f(x)$$

The graph of  $y = f(x)$  is shown on the grid.

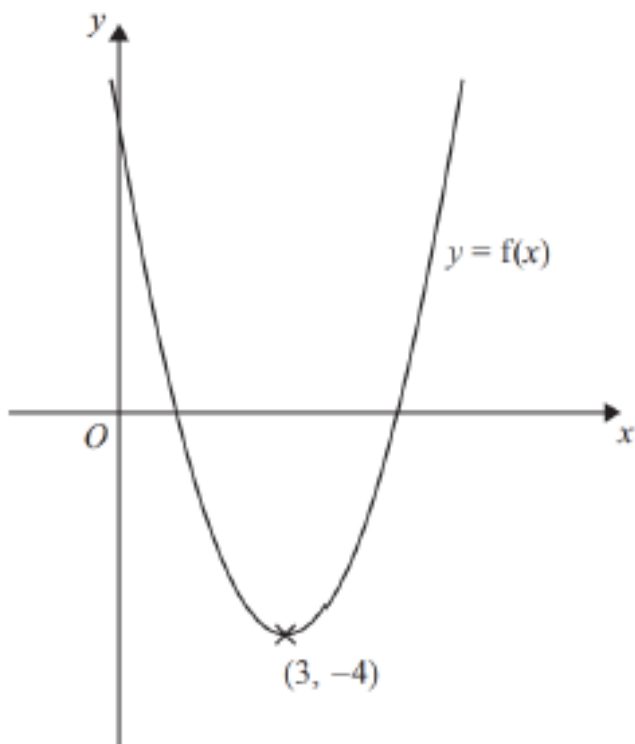


(a) On the grid above, sketch the graph of  $y = -f(x)$ .

[2 marks]



**Question 13**



The diagram shows part of the curve with equation  $y = f(x)$ .  
The coordinates of the minimum point of this curve are  $(3, -4)$

Write down the coordinates of the minimum point of the curve with equation

(i)  $y = f(x) + 3$

(....., .....) )

(ii)  $y = f(x + 2)$

(....., .....) )

(iii)  $y = f(-x)$

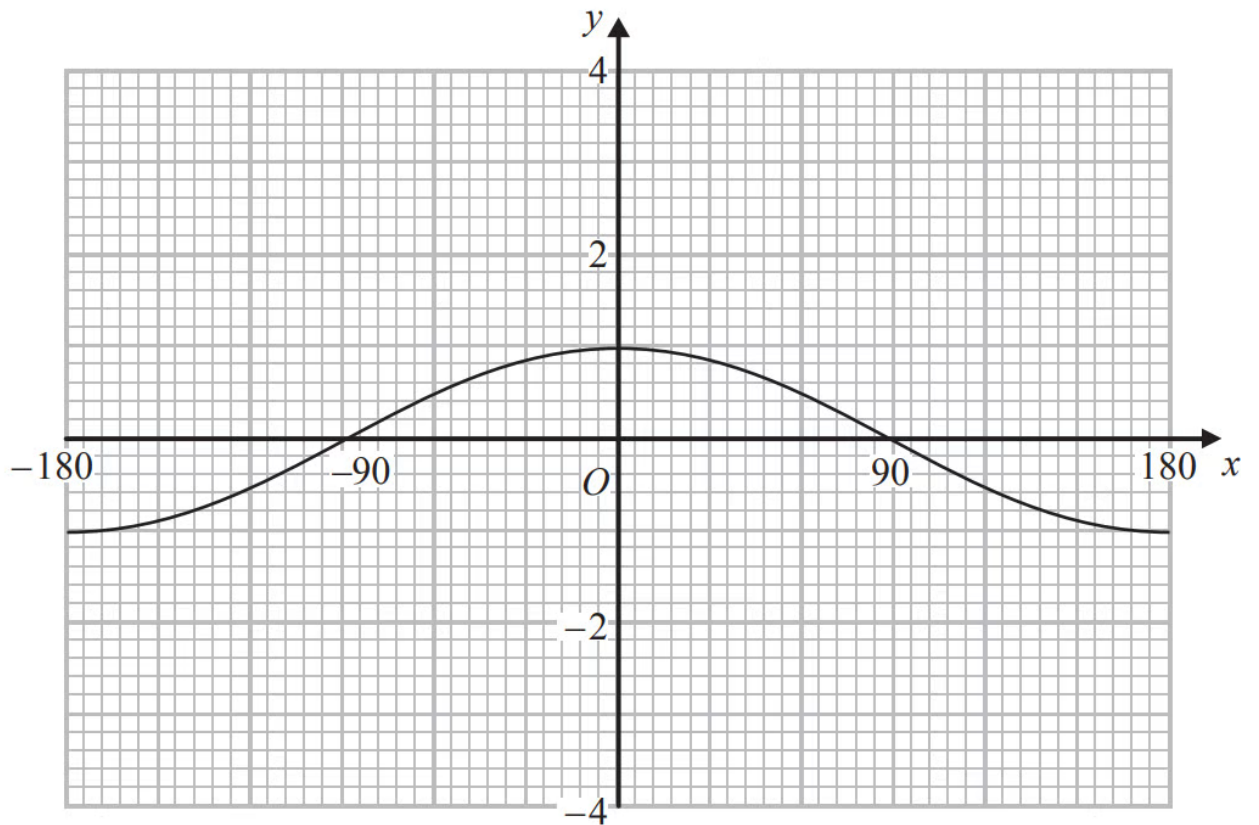
(....., .....) )

**[3 marks]**



**Question 14**

Here is the graph of  $y = \cos x^\circ$  for  $-180 \leq x \leq 180$



(b) On the grid above, sketch the graph of  $y = -\cos x^\circ$  for  $-180 \leq x \leq 180$

**[2 marks]**



**Question 15**

The graph of  $y = f(x)$  has a maximum point at  $(-4, 3)$ .

(b) Write down the coordinates of the maximum point of the graph of  $y = f(-x)$ .

[2 marks]