EXAM PAPERS PRACTICE

GCSE OCR Math J560

Transformation of Graph

Question Paper

"We will help you to achieve A Star "

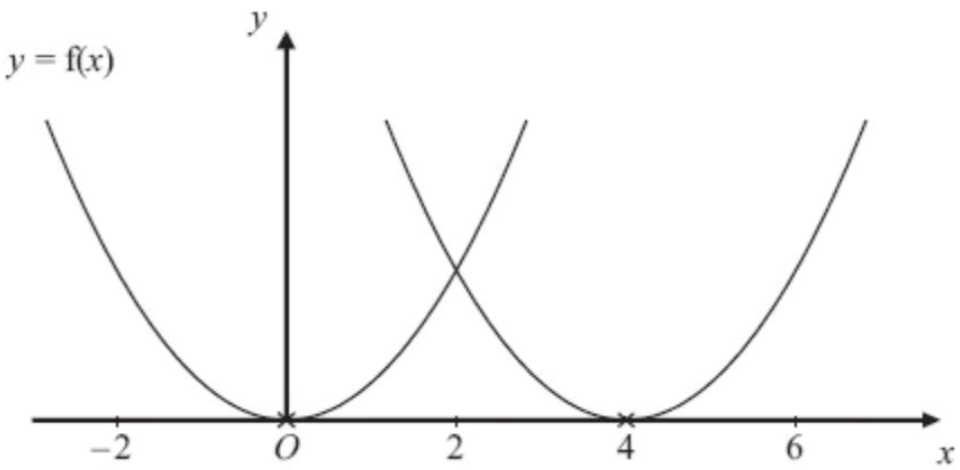
Question 1

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



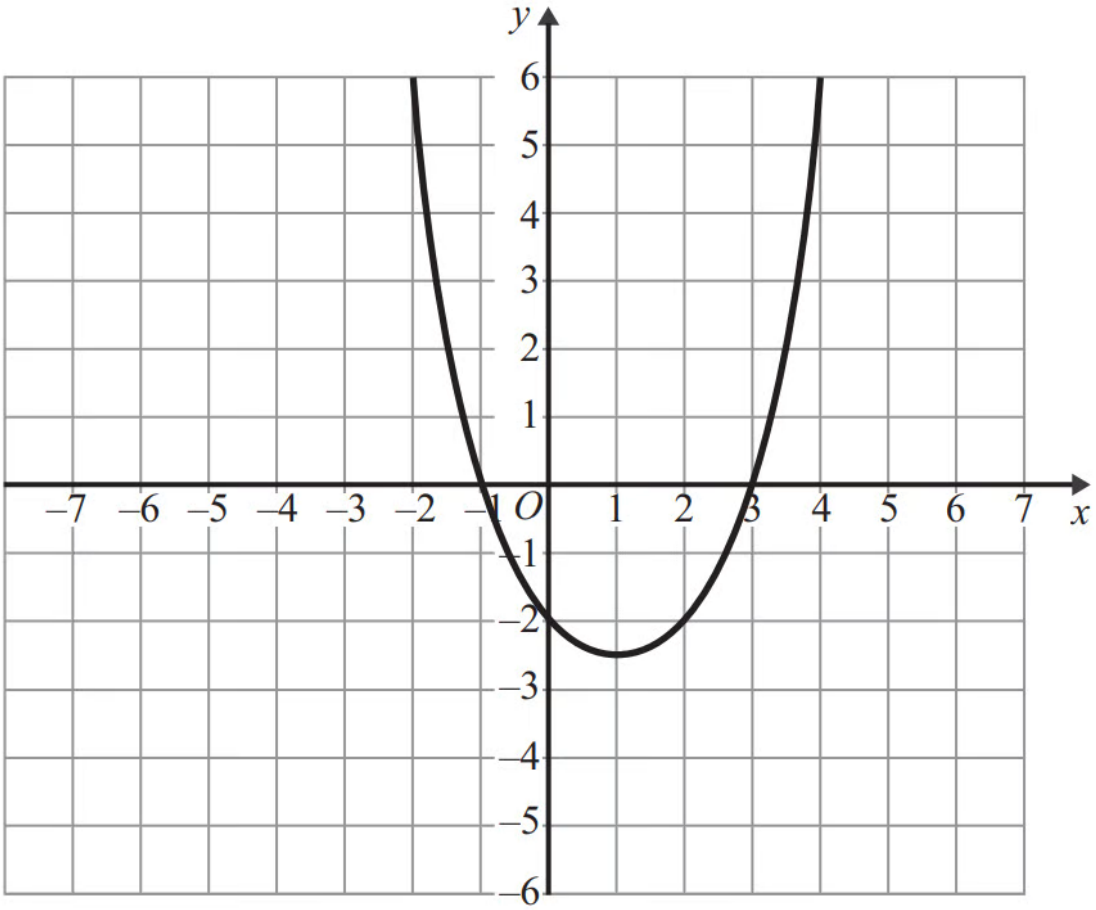
The curve with equation $y = f(x)$ is translated so that the point at $(0, 0)$ is mapped onto the point $(4, 0)$.

Find an equation of the translated curve.

[2 marks]

Question 3

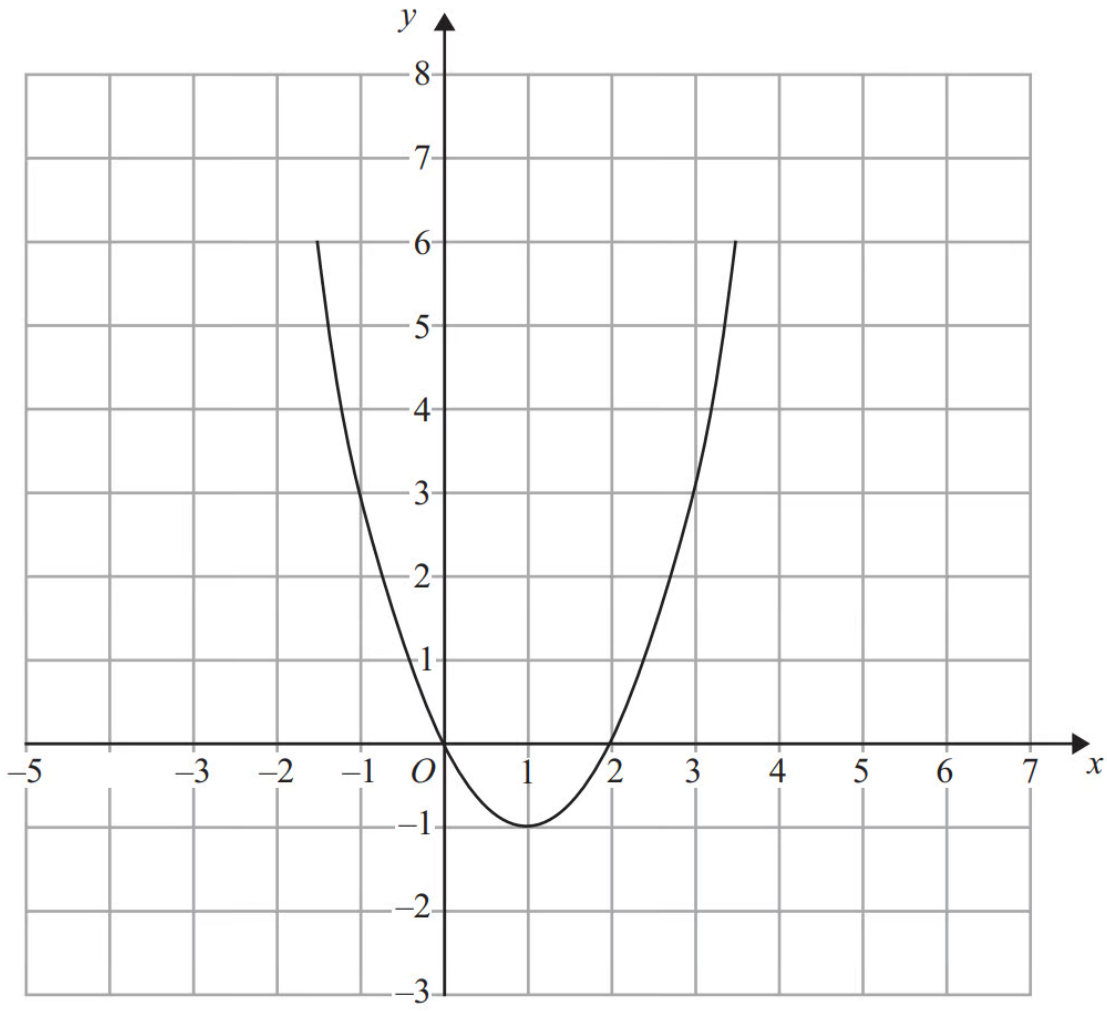
(b) On this grid, sketch the graph of $y = -f(x)$



[2 marks]

Question 4

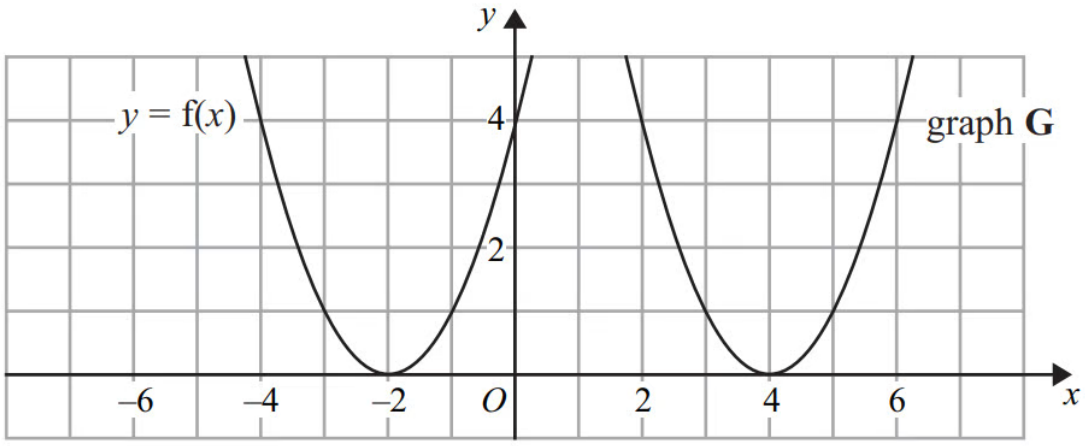
(b) On this grid, sketch the graph of $y = f(-x) + 2$



[2 marks]

Question 5

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



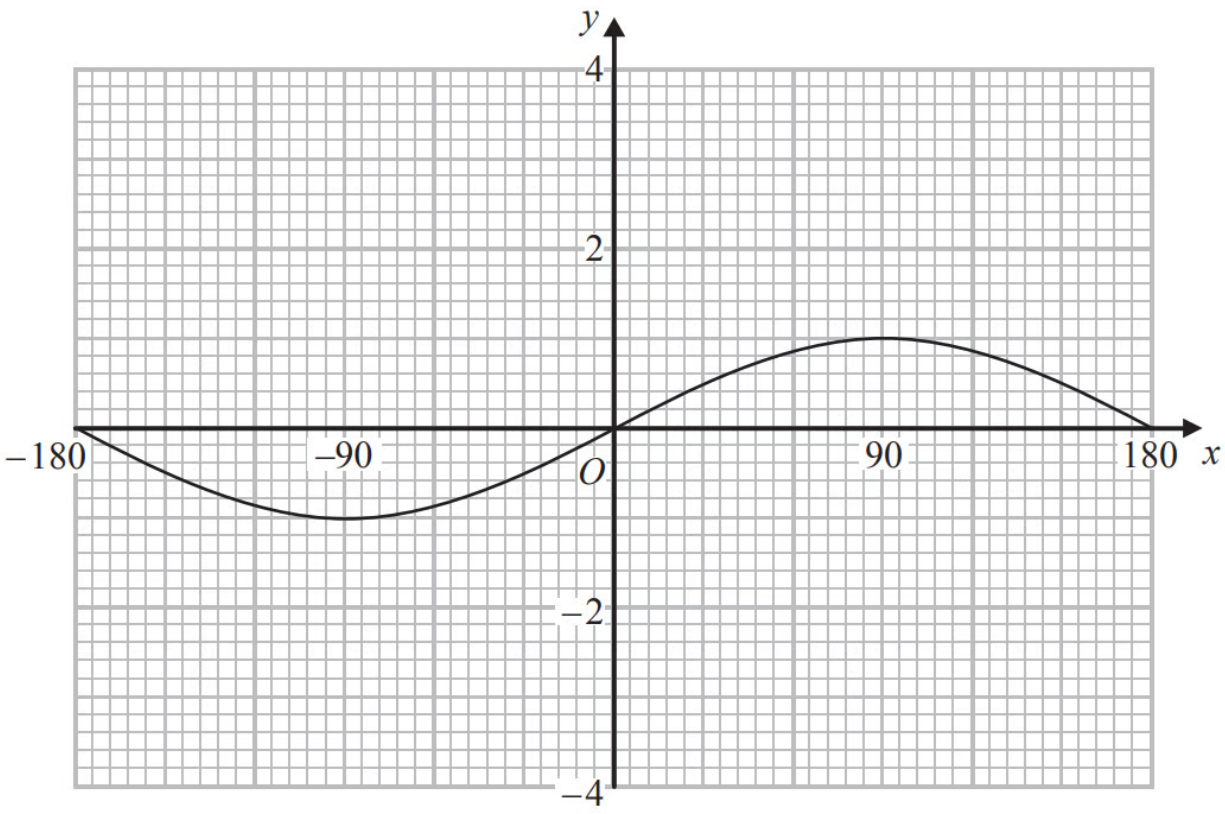
The graph **G** is a translation of the graph of $y = f(x)$.

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

[1 mark]

Question 6

Here is the graph of $y = \sin x°$ for $-180 \leqslant x \leqslant 180$

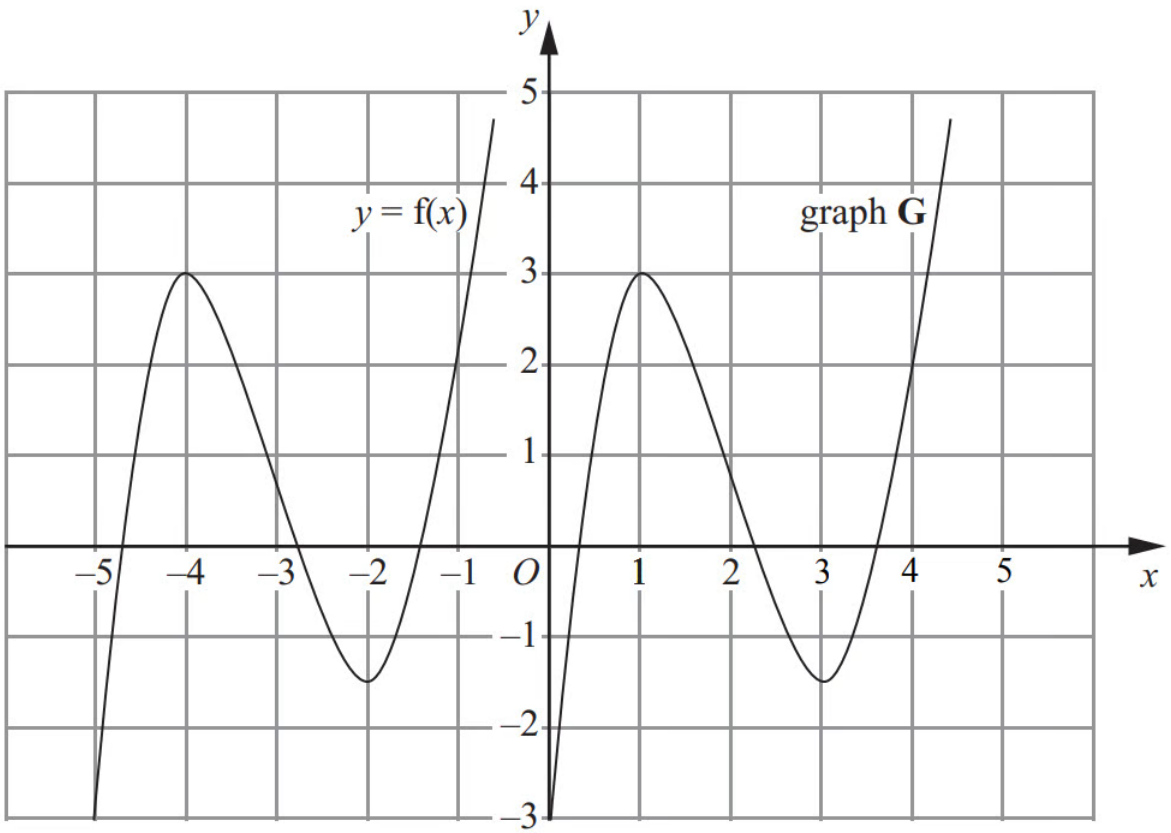


(a) On the grid above, sketch the graph of $y = \sin x° + 2$ for $-180 \leqslant x \leqslant 180$

[2 marks]

Question 7

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



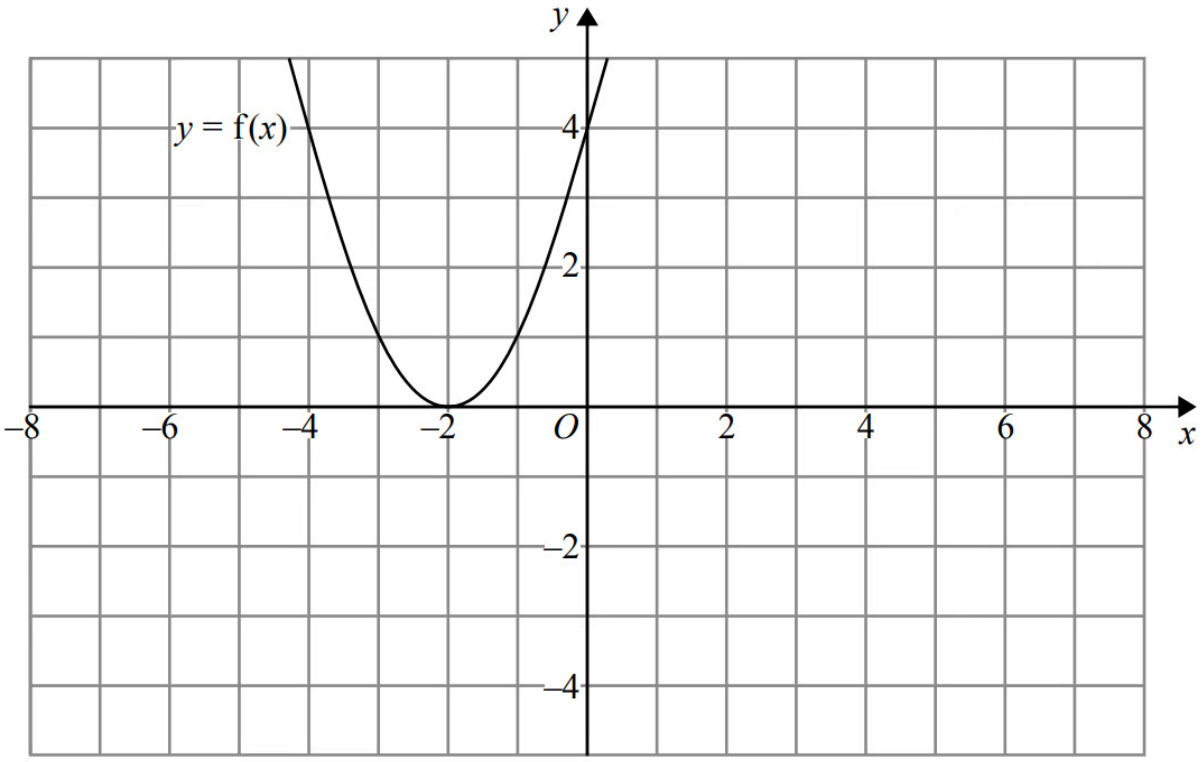
The graph **G** is a translation of the graph of $y = f(x)$.

(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.



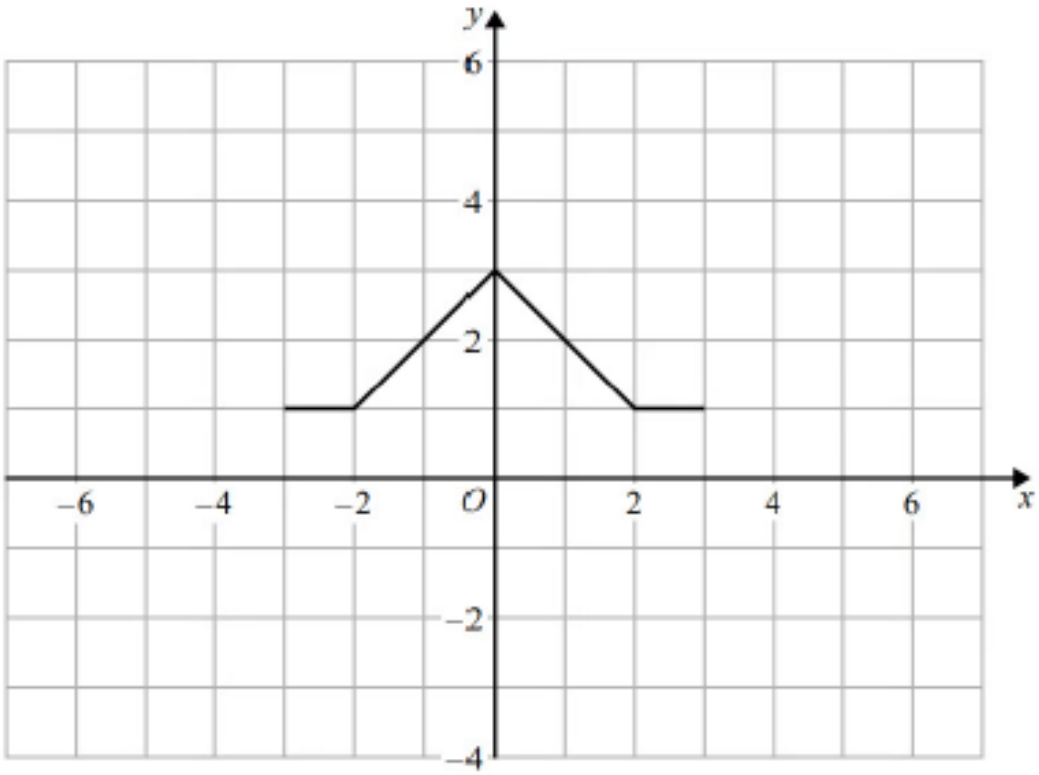
(a) On the grid above, sketch the graph of $y = f(-x)$

[1 mark]

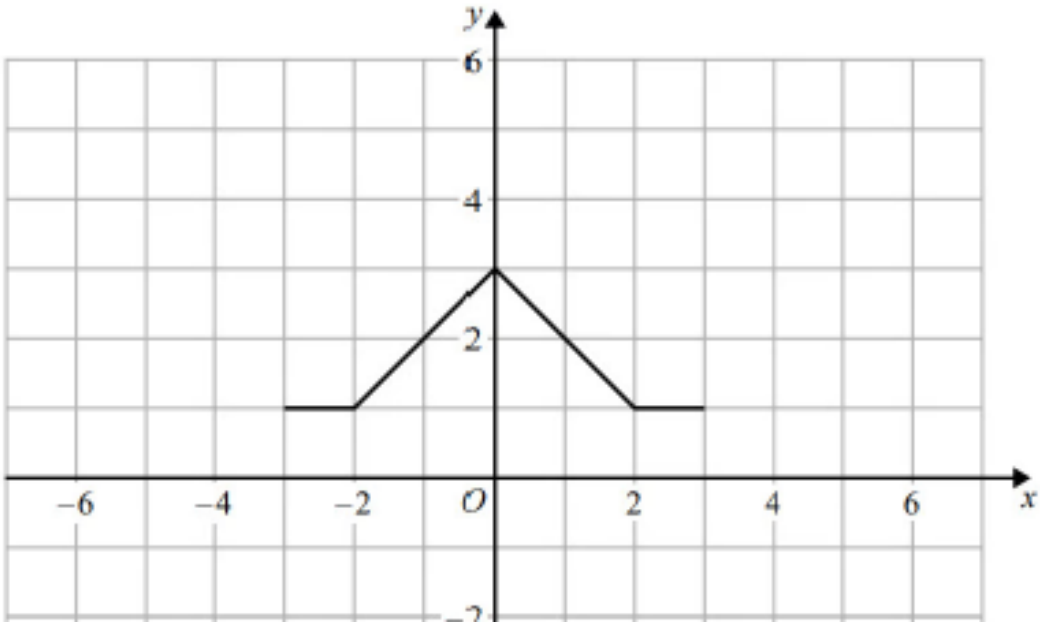
Question 9

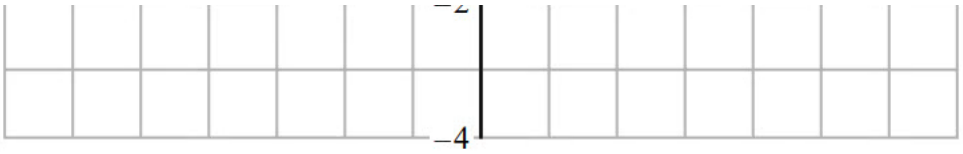
The graph of $y = f(x)$ is shown on both grids below.

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



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





[2 marks]

Question 10

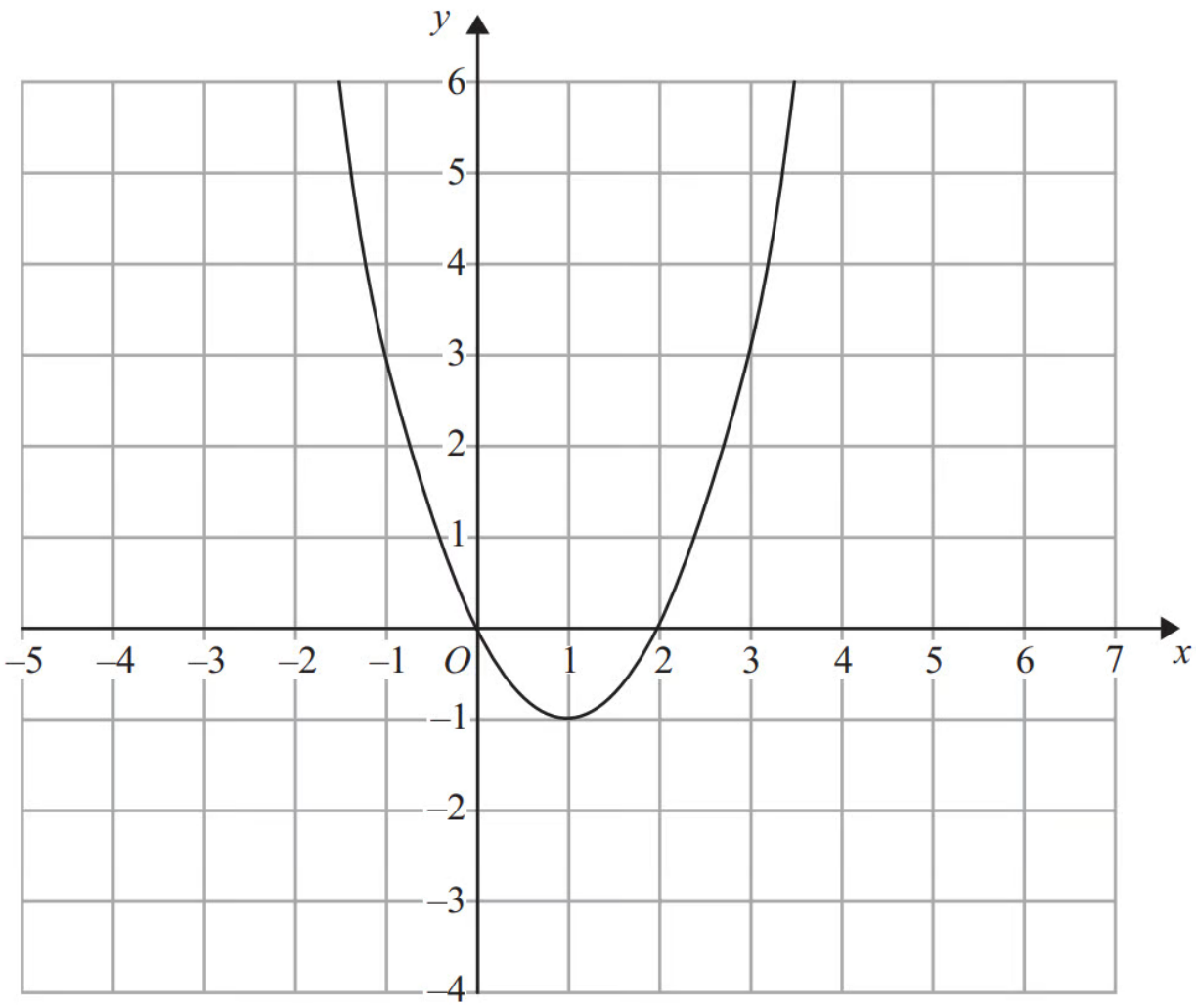
(b) Write down the coordinates of the minimum point of the curve with the equation $y = f(x + 5) + 6$

[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 $y = f(x - 3)$

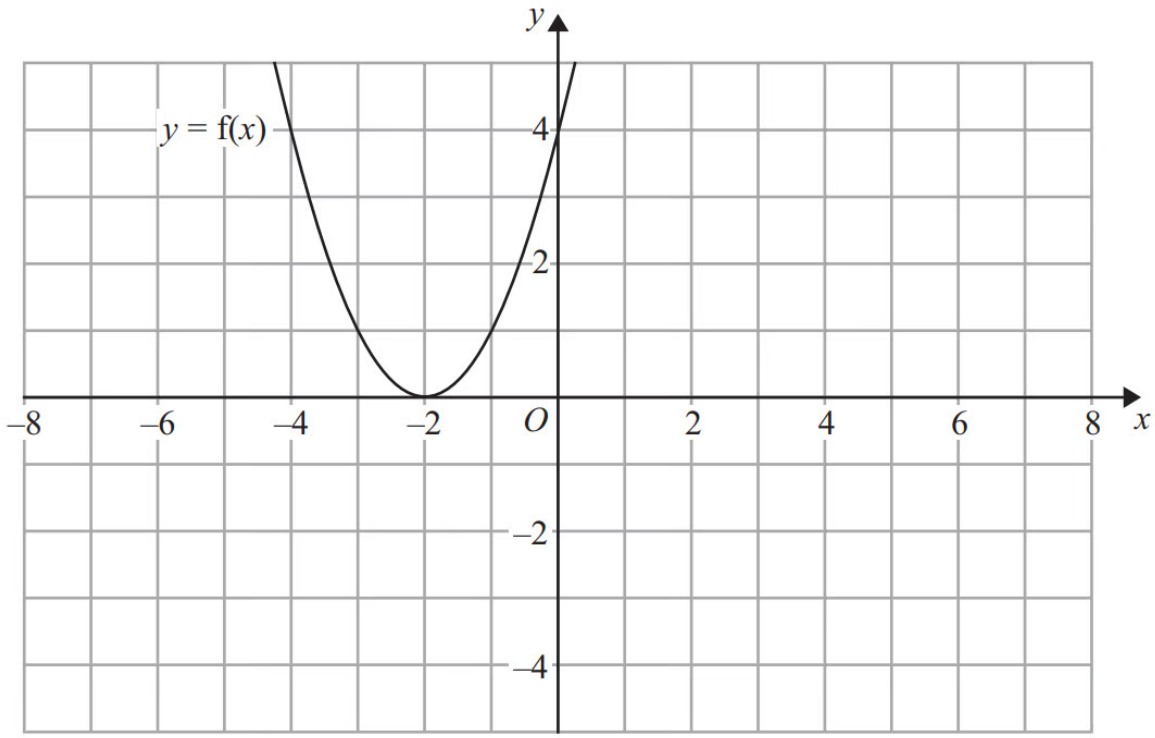


[2 marks]

Question 12

$y = f(x)$

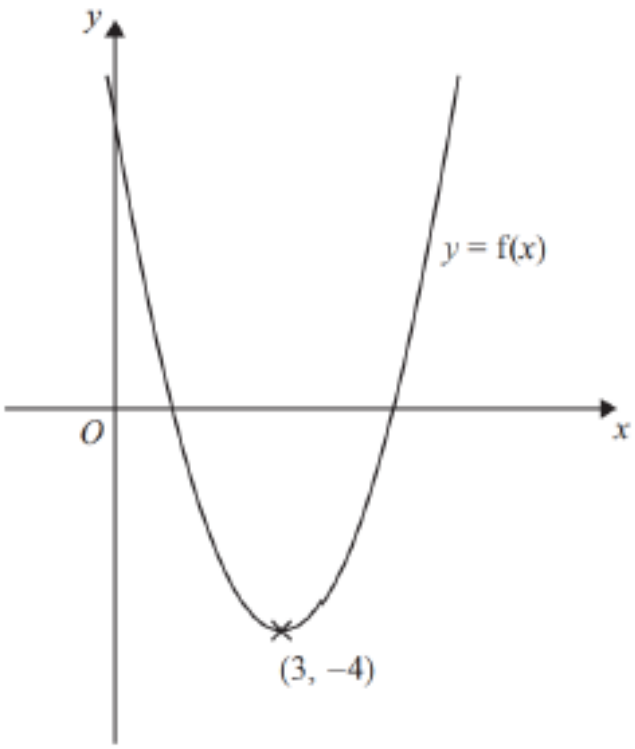
The graph of $y = f(x)$ is shown on the grid.



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

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

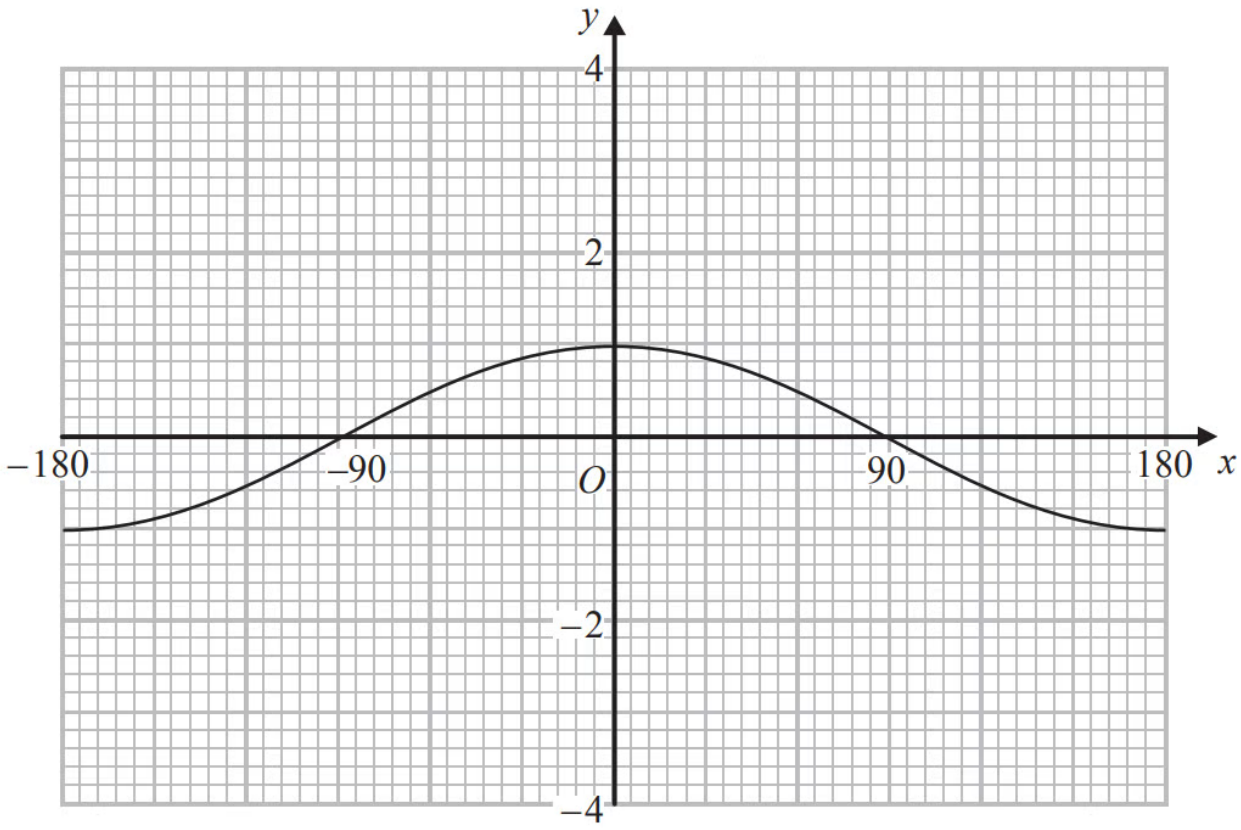
(iii) $y = f(-x)$

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

[3 marks]

Question 14

Here is the graph of $y = \cos x°$ for $-180 \leqslant x \leqslant 180$



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

[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]