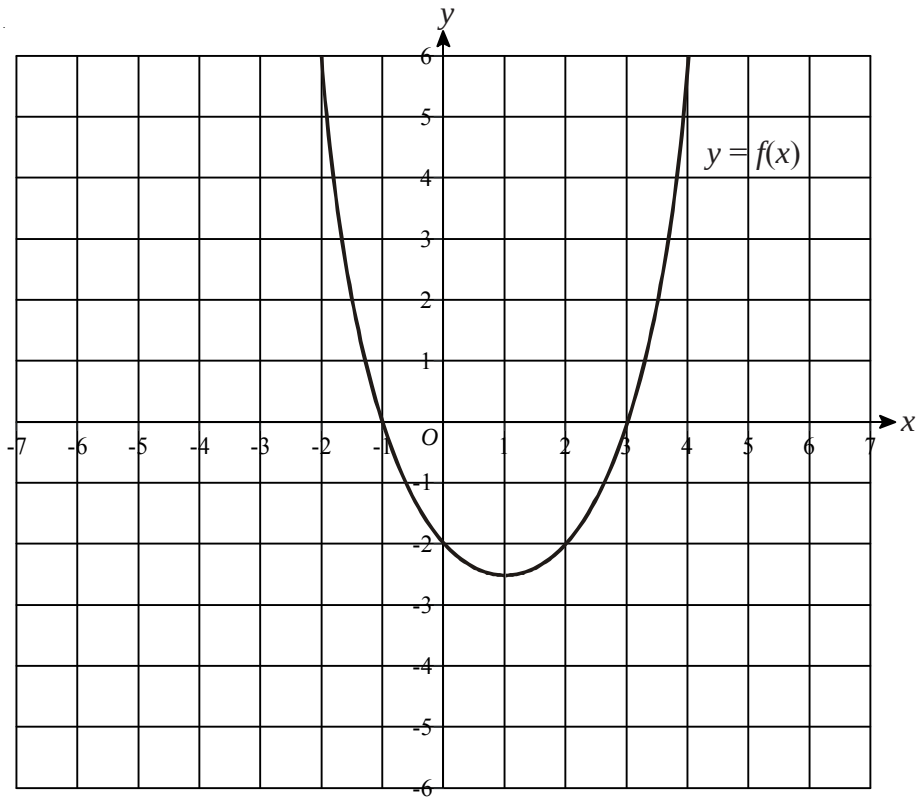
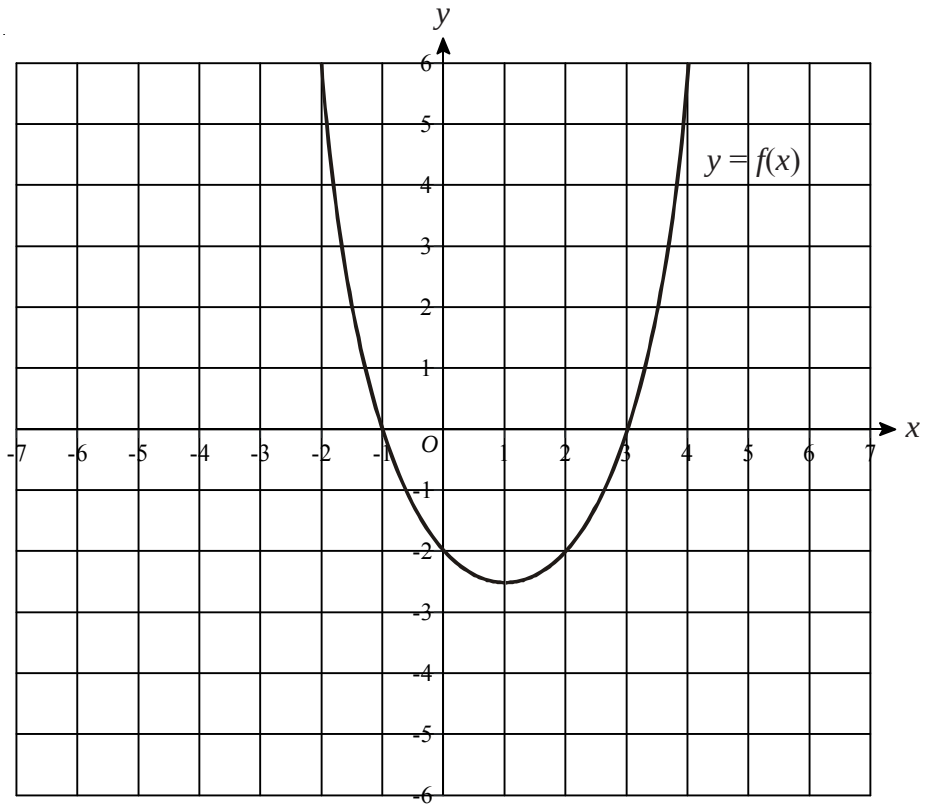
Transformation of Functions

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

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

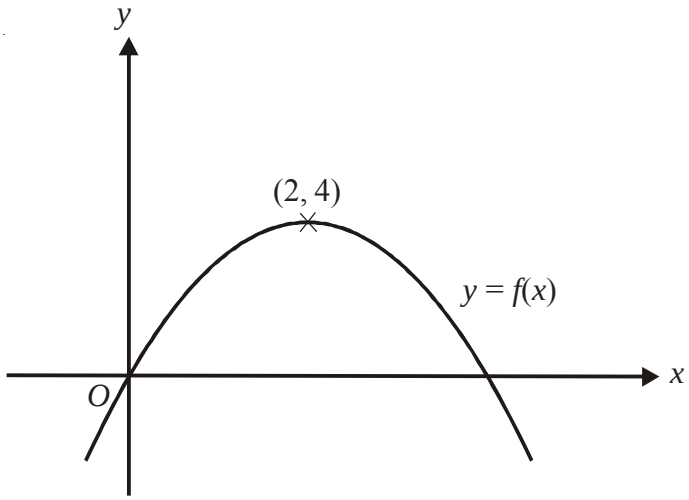


b) On this grid sketch the graph of $y = -f(x)$



Transformation of Functions

1)

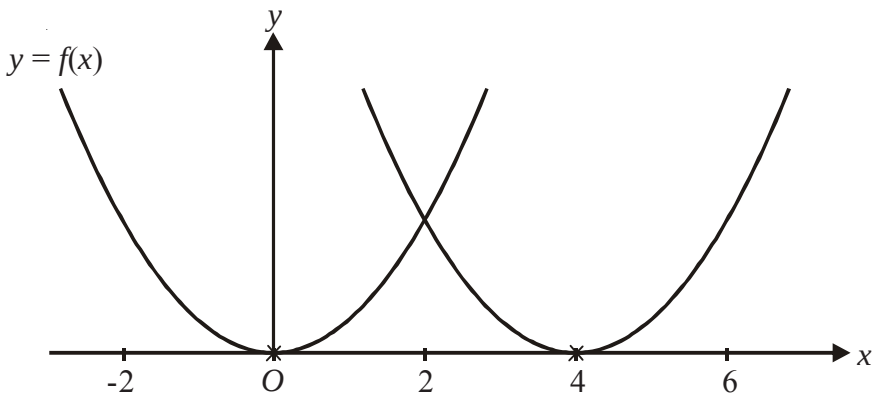


The diagram shows part of the curve with equation $y = f(x)$.
The coordinates of the maximum point of this curve are (2, 4).

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

$y = f(x - 2)$

2)

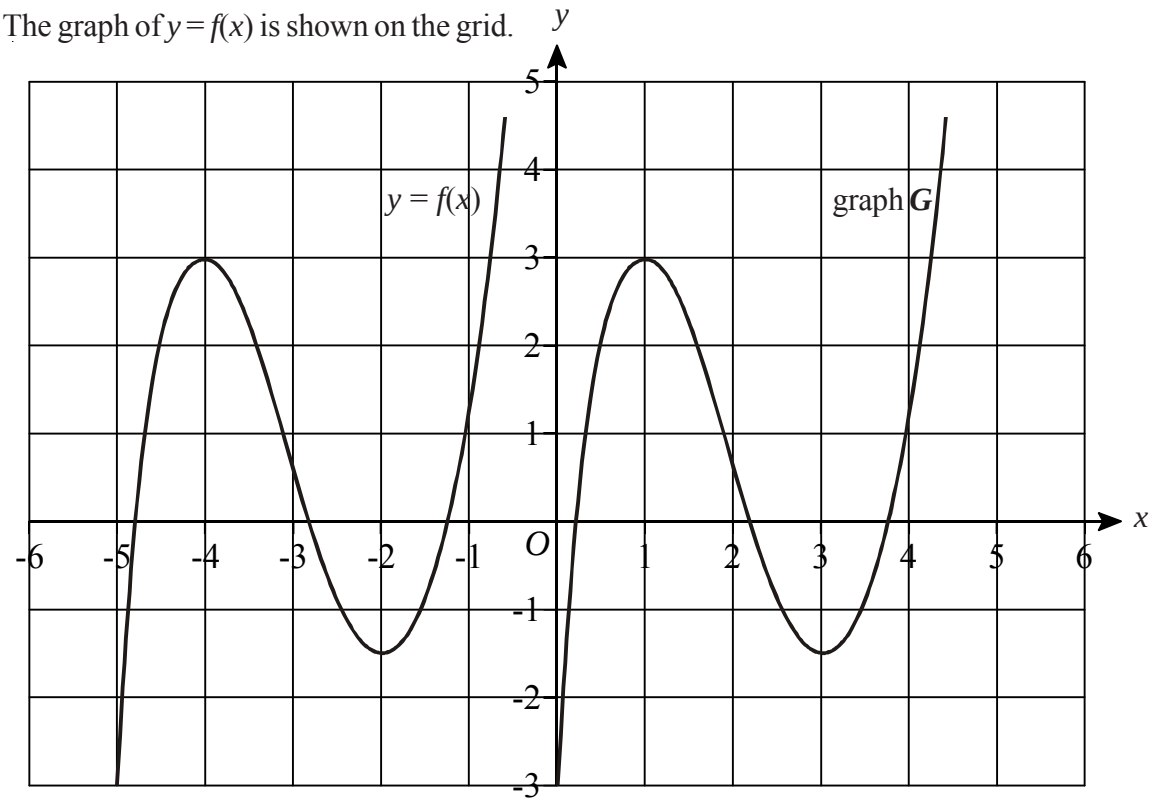


The curve with equation $y = f(x)$ is translated so that the point at (0, 0) is mapped onto the point (4, 0).

Find the equation of the translated curve.

Transformation of Functions

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



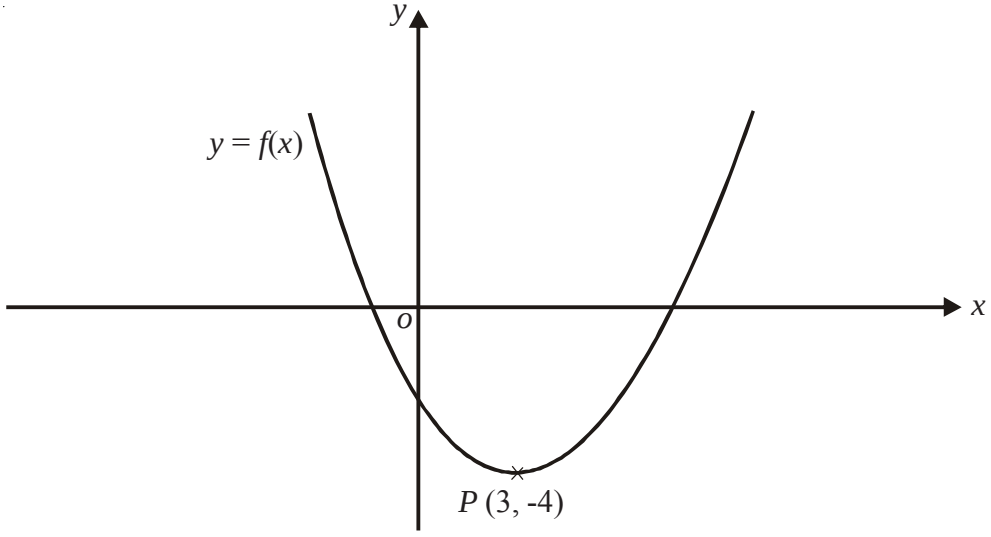
The graph ***G*** is a translation of the graph of $y = f(x)$.

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

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 $y = f(-x)$.

2) This is a sketch of the curve with the equation $y = f(x)$.
The only minimum point of the curve is at P (3, -4).

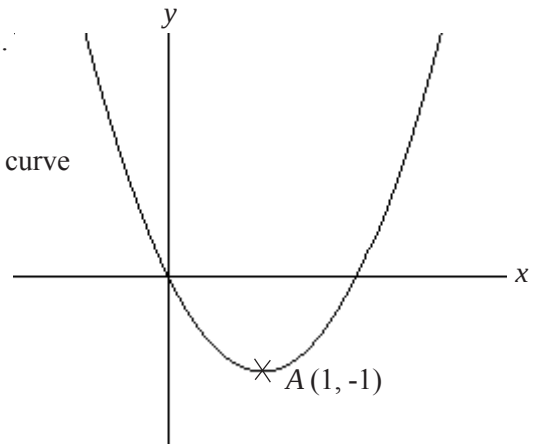


a) Write down the coordinates of the minimum point of the curve with the equation $y = f(x - 2)$

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

Transformation of Functions

1) This is a sketch of the curve with equation $y = f(x)$.
It passes through the origin O.
The only vertex of the curve is at A (1, -1)

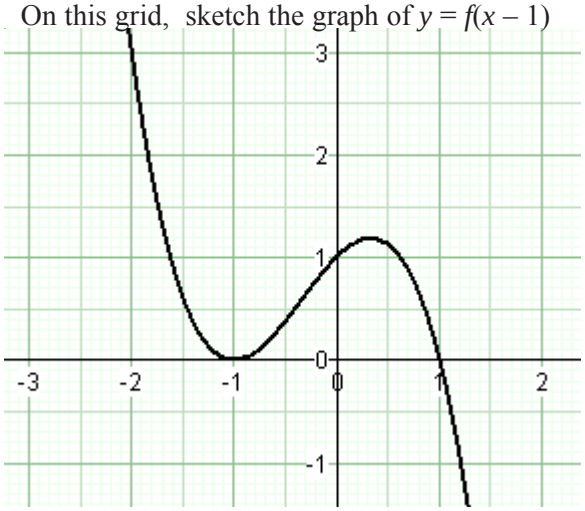


a) Write down the coordinates of the vertex of the curve with equation
(i) $y = f(x - 3)$
(ii) $y = f(x) - 5$
(iii) $y = -f(x)$

b) The curve $y = x^2$ has been translated to give the curve $y = f(x)$.
Find $f(x)$ in terms of x.

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

On this grid, sketch the graph of $y = f(x - 1)$



3) Sketch the graph of $y = (x - 2)^2 + 3$
State the coordinates of the vertex.