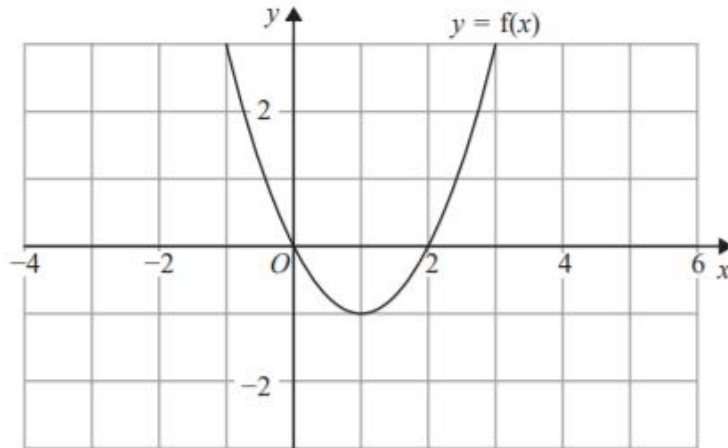


Translation of Graphs Past Paper Questions GCSE Edexcel – Non-Calculator

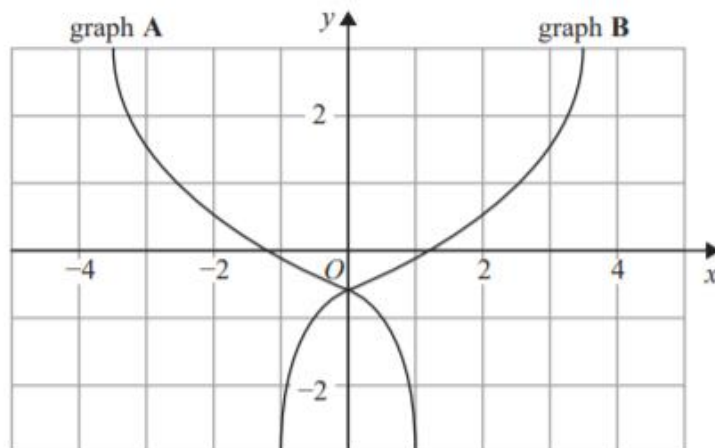
1.

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



(a) On the grid above, sketch the graph of $y = f(x - 2)$

(1)



On the grid, graph A has been reflected to give graph B.

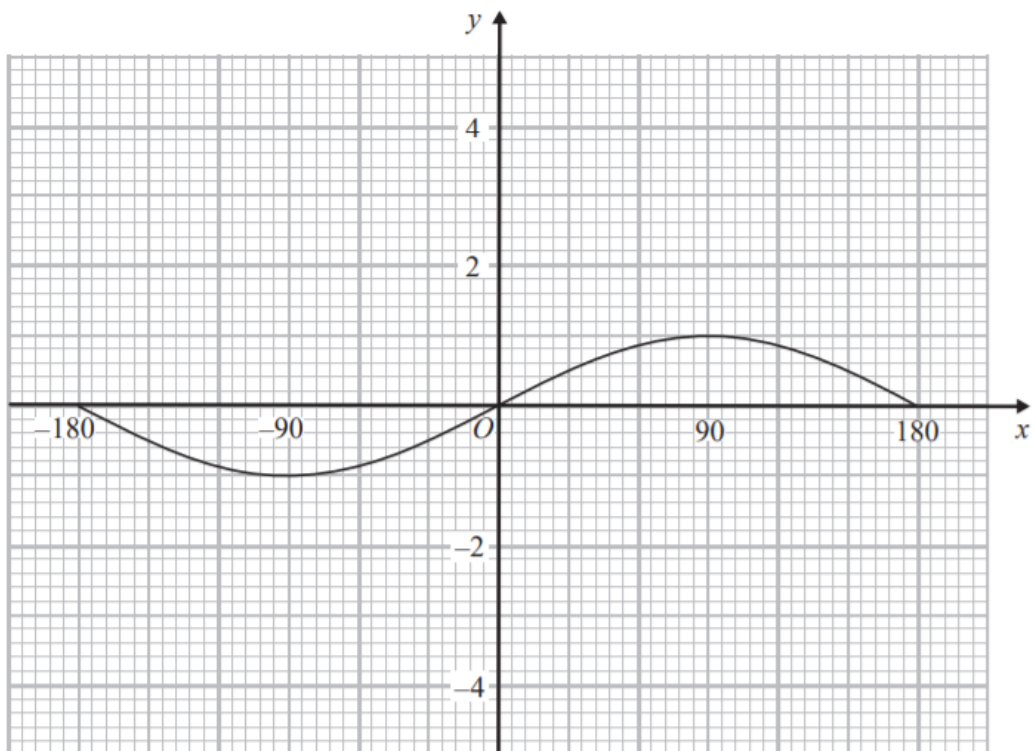
The equation of graph A is $y = g(x)$

(b) Write down the equation of graph B.

(1)

2.

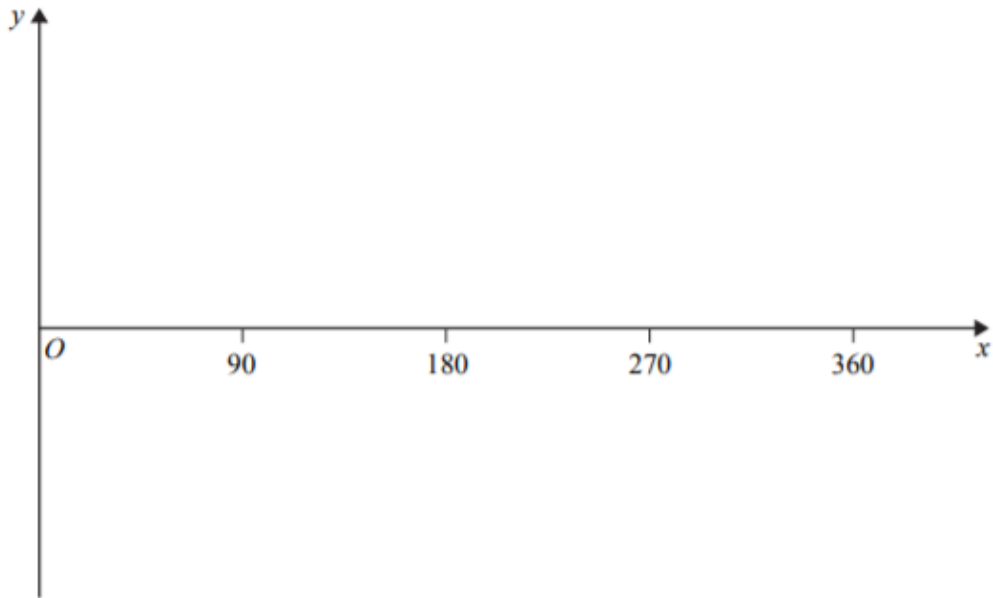
Here is the graph of $y = \sin x^\circ$ for $-180 \leq x \leq 180$



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

3.

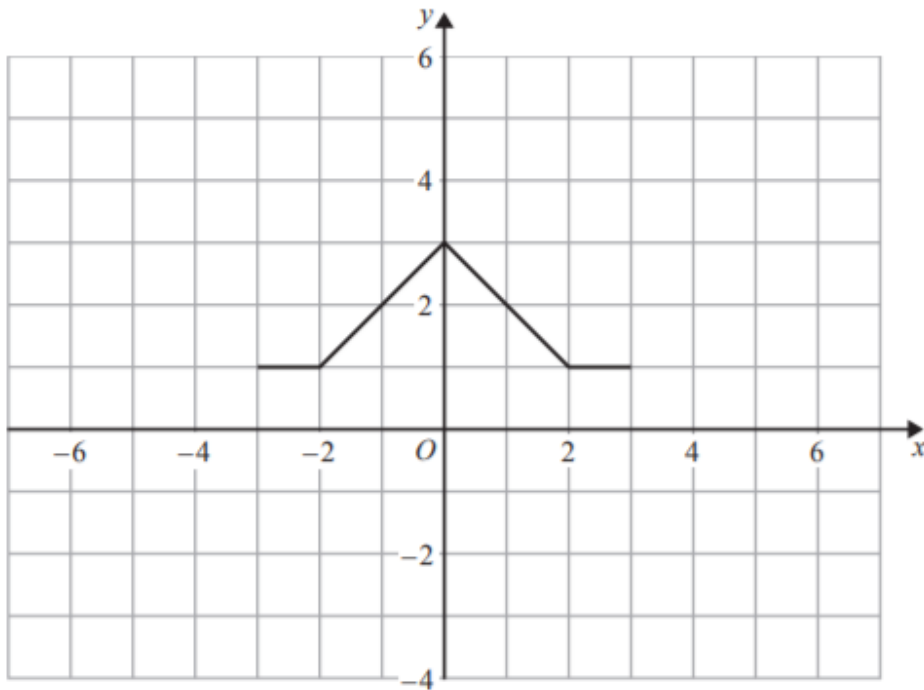
(a) Sketch the graph of $y = \cos x^\circ$ for $0 \leq x \leq 360$



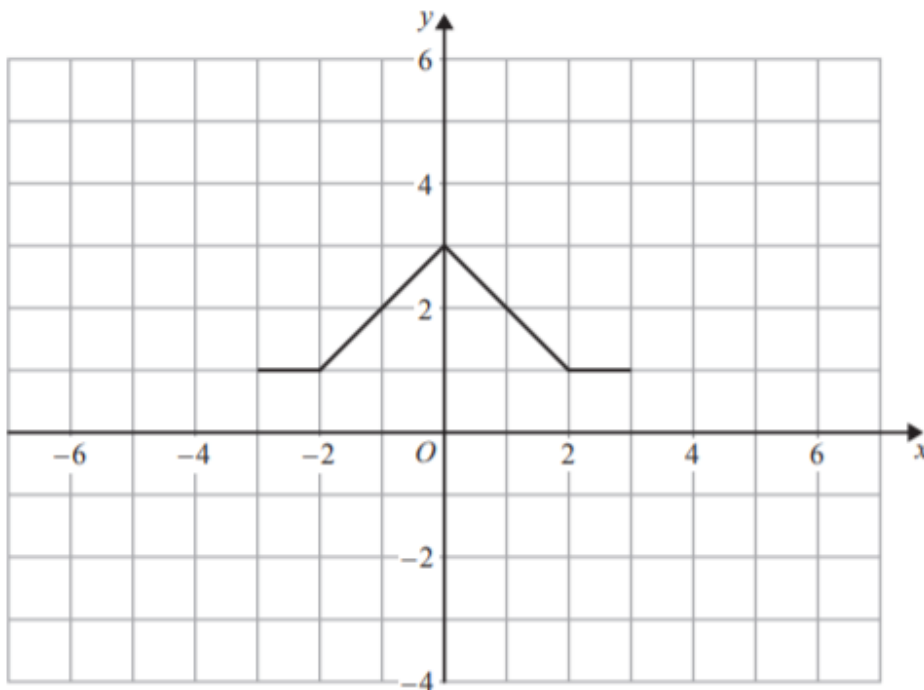
(2)

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

(i) On this grid, draw the graph of $y = 2f(x)$

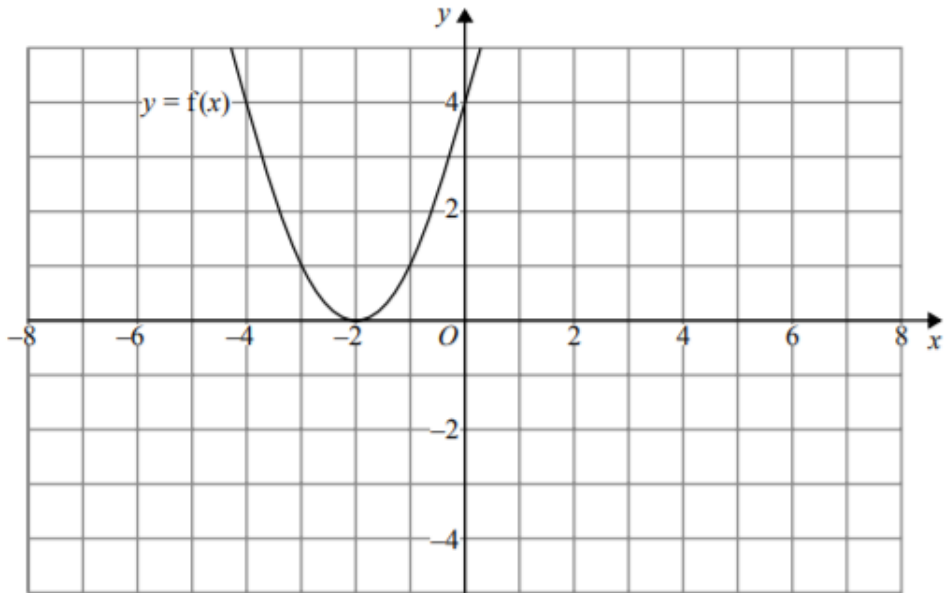


(ii) On the grid below, draw the graph of $y = f(x - 3)$



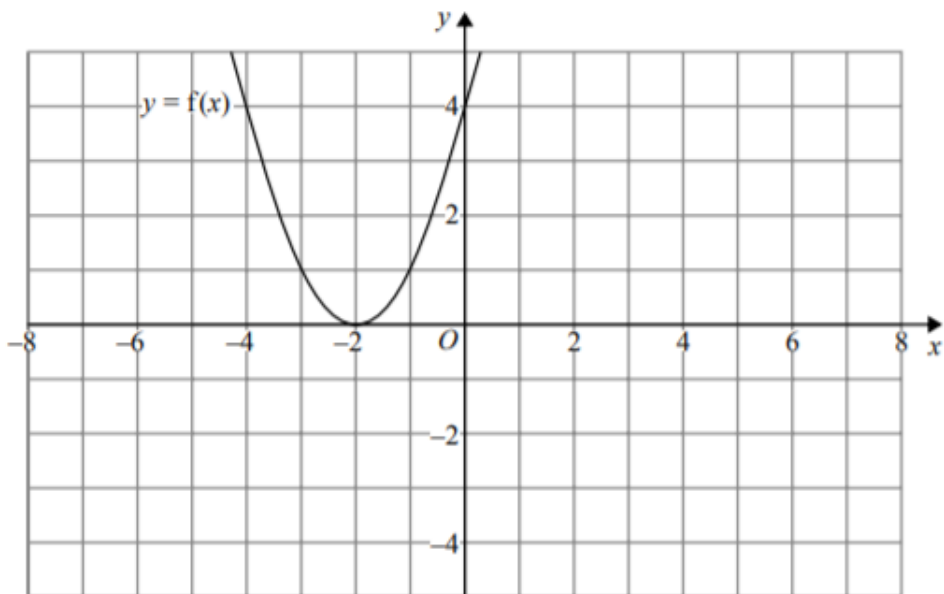
4.

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)

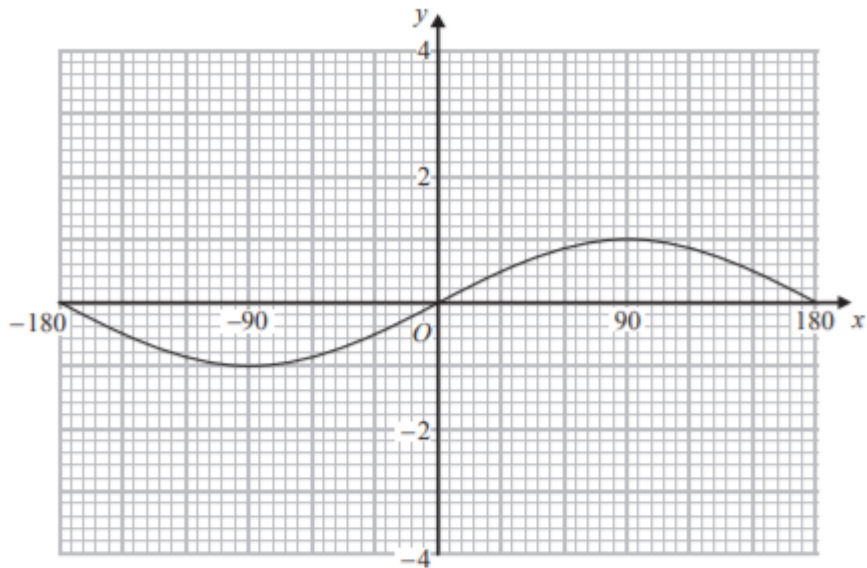


(b) On this grid, sketch the graph of $y = -f(x) + 3$

(1)

5.

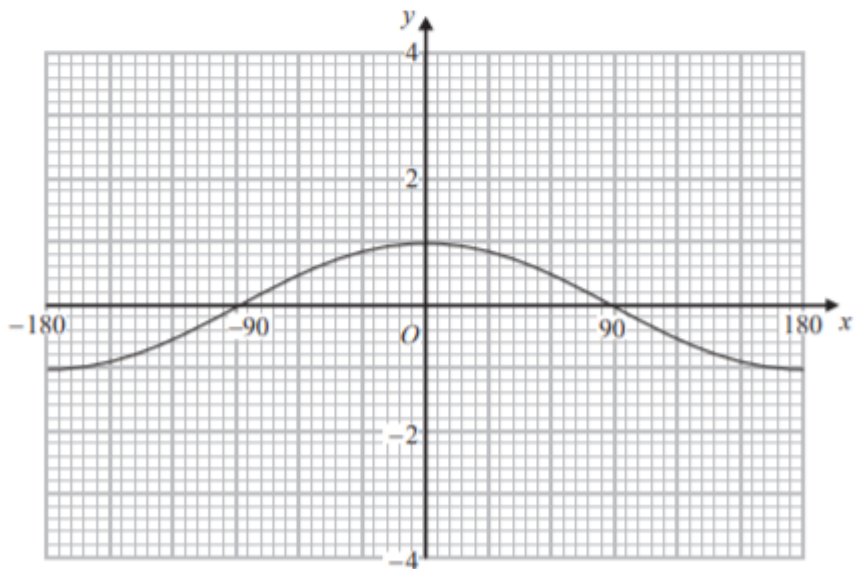
Here is the graph of $y = \sin x^\circ$ for $-180 \leq x \leq 180$



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

(2)

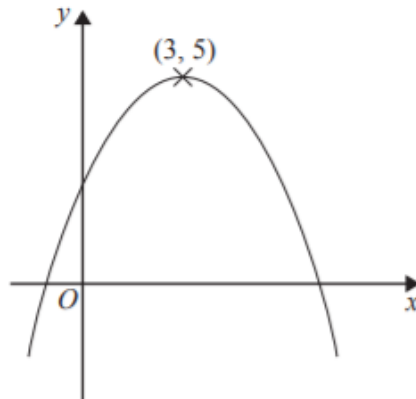
Here is the graph of $y = \cos x^\circ$ for $-180 \leq x \leq 180$



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

(2)

6.



The diagram shows part of the curve with equation $y = f(x)$.
The coordinates of the maximum point of the curve are $(3, 5)$.

(a) Write down the coordinates of the maximum point of the curve with equation

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

(.....,))

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

(.....,))

(iii) $y = f(3x)$

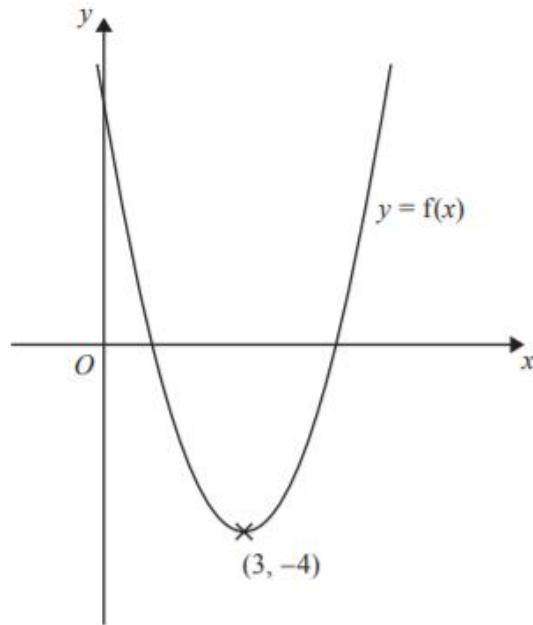
(.....,))
(3)

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

(b) Describe the transformation.

.....
(1)

7.



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) $y = f(2x)$

(.....,))

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

(.....,))