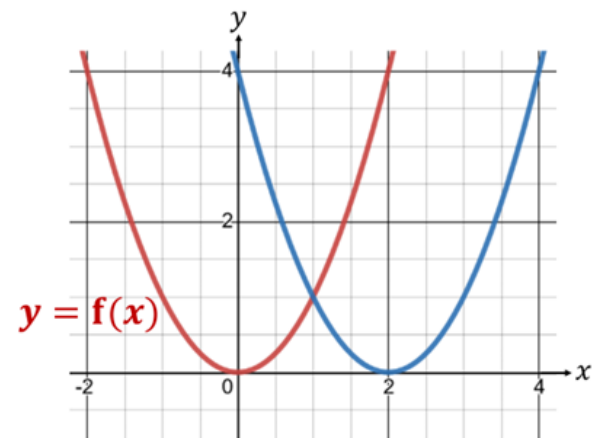


Question 1

The diagram shows the function $f(x)$.
The other function pictured is a transformation of $f(x)$; write this function using function notation.



Ade's answer: $y = f(x + 2)$



Belle's answer: $y = f(x - 2)$



Chloe's answer: $y = f(x) + 2$



Dean's answer: $y = f(x) - 2$

Question 2

A function A, $y = g(x)$, is drawn on a set of axes.
The function B, $y = g(x) - 3$, is drawn on the same axes.
Describe the transformation from function A to function B



Ade's answer: Translation $\begin{pmatrix} -3 \\ 0 \end{pmatrix}$



Belle's answer: Translation $\begin{pmatrix} 3 \\ 0 \end{pmatrix}$



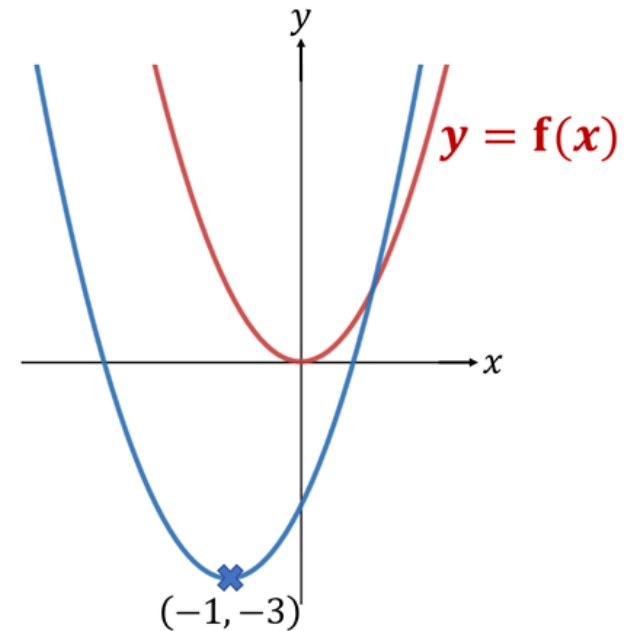
Chloe's answer: Translation $\begin{pmatrix} 0 \\ -3 \end{pmatrix}$



Dean's answer: Translation $\begin{pmatrix} 0 \\ 3 \end{pmatrix}$

Question 3

The diagram shows the function $f(x)$ whose minimum point is the origin.
The other function pictured is a transformation of $f(x)$ whose minimum point is $(-1, -3)$; write this function using function notation.



Ade's answer:

$$y = f(x + 3) - 1$$



Belle's answer:

$$y = f(x - 1) - 3$$



Chloe's answer:

$$y = f(x + 1) + 3$$



Dean's answer:

$$y = f(x + 1) - 3$$

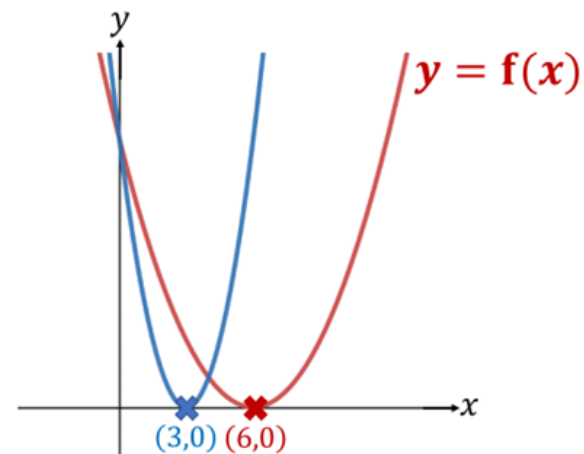
Question 4

The function $y = f(x)$ is shown; it has a minimum point of $(6,0)$.

The other function shown is a transformation of $y = f(x)$, whose minimum point is $(3,0)$.

Both functions intersect the y -axis at $(0,5)$.

Write, using function notation, the second function.



Ade's answer: $y = 2f(x)$



Belle's answer: $y = f(x + 3)$



Chloe's answer: $y = f(2x)$



Dean's answer: $y = f\left(\frac{1}{2}x\right)$

Question 5

The function $y = f(x)$ is shown.
The minimum point of $y = f(x)$ is $(2, -6)$.
Write the coordinates of the minimum point
of $y = f(x) + 5$.



Ade's answer:
 $(2, -1)$



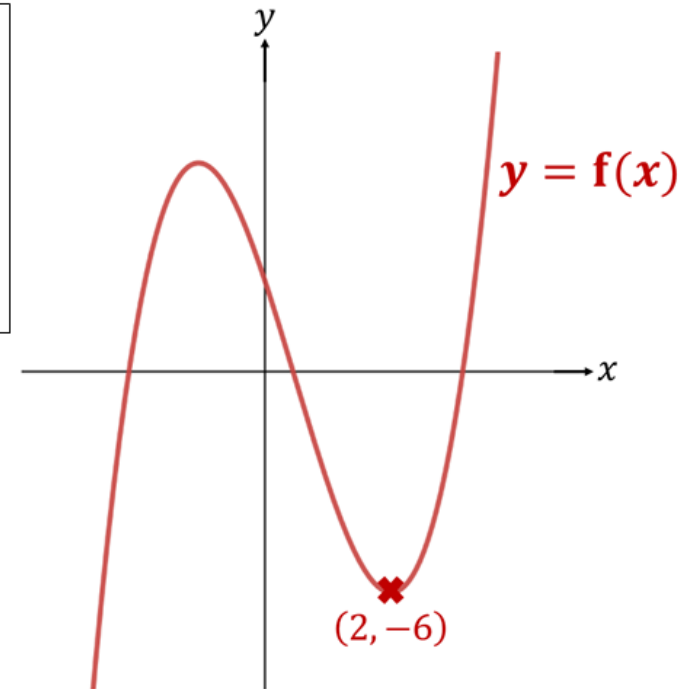
Belle's answer:
 $(7, -6)$



Chloe's answer:
 $(7, -1)$



Dean's answer:
 $(-3, -6)$



Question 6

The function $y = f(x)$ is shown.
The minimum point of $y = f(x)$ is $(2, -6)$.
Write the coordinates of the minimum point
of $y = f(x + 3)$.



Ade's answer:
 $(-1, -6)$



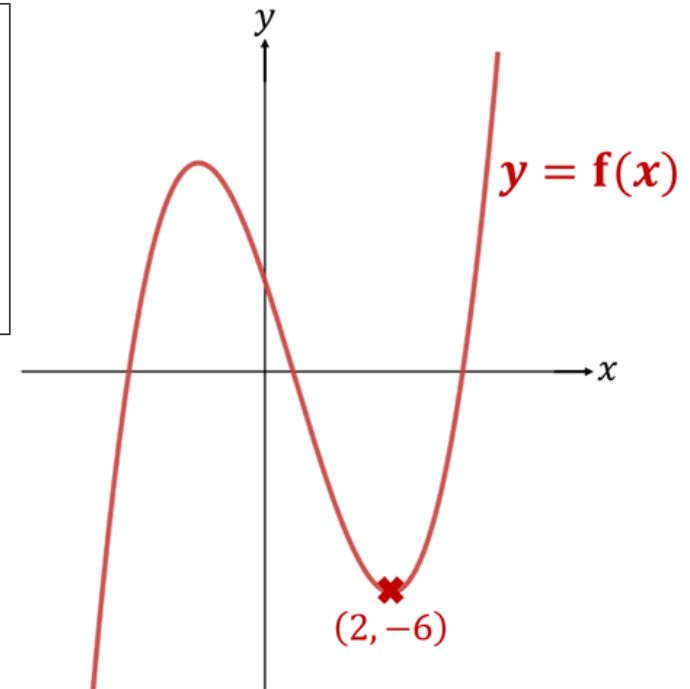
Belle's answer:
 $(5, 6)$



Chloe's answer:
 $(2, -3)$



Dean's answer:
 $(2, -2)$



Question 7

The function $y = f(x)$ is shown.
The minimum point of $y = f(x)$ is $(2, -6)$.
Write the coordinates of the minimum point
of $y = 2f(x)$.



Ade's answer:
 $(1, -6)$



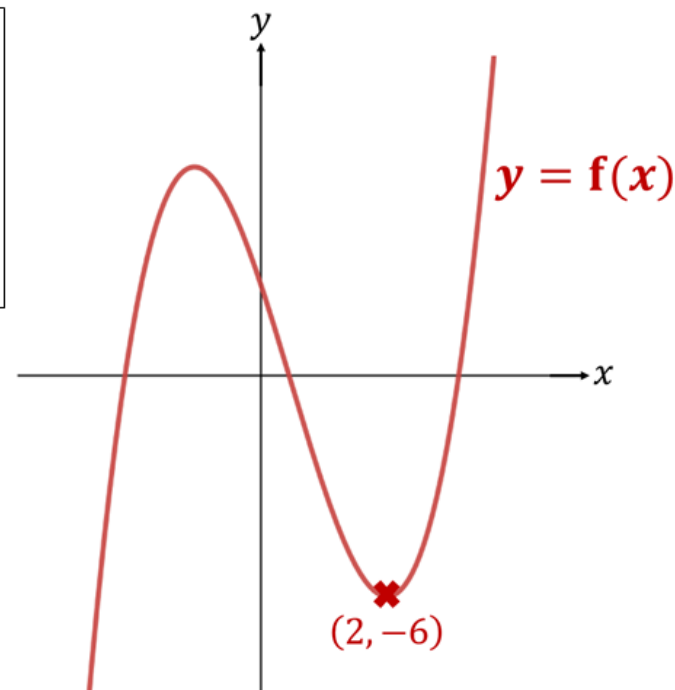
Belle's answer:
 $(4, -6)$



Chloe's answer:
 $(2, -3)$



Dean's answer:
 $(2, -12)$



Question 8

The function $y = \cos(x)$ is shown as a dotted line on the graph for $0^\circ \leq x \leq 360^\circ$.

What is the equation of the other function pictured?



Ade's answer:
 $y = \sin(x)$



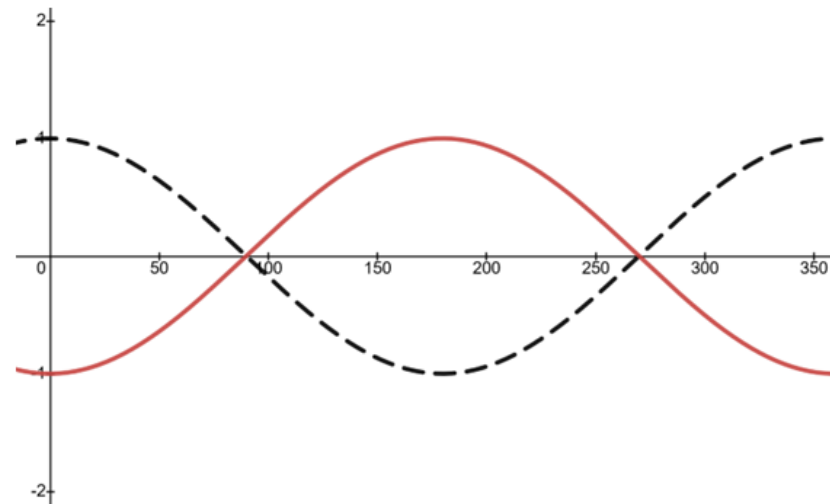
Belle's answer:
 $y = \cos(-x)$



Chloe's answer:
 $y = -\cos(x)$



Dean's answer:
 $y = \cos(x)$



Question 9

The function $y = \sin(x)$ is shown as a dotted line on the graph for $0^\circ \leq x \leq 360^\circ$.

What is the equation of the other function pictured?



Ade's answer:

$$y = 3 + \sin(x)$$



Belle's answer:

$$y = 3 \sin(x)$$



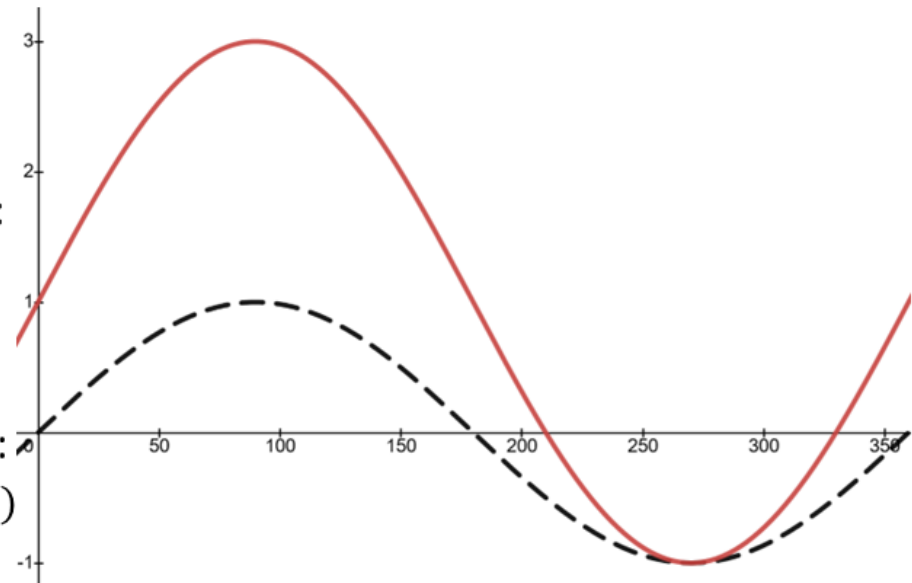
Chloe's answer:

$$y = 1 + 2 \sin(x)$$



Dean's answer:

$$y = 1 + \sin(2x)$$



Question 10

The function $y = \cos(x)$ is shown as a dotted line on the graph for $-180^\circ \leq x \leq 180^\circ$.

What is the equation of the other function pictured?



Ade's answer:

$$y = 3 \cos(2x)$$



Belle's answer:

$$y = 2 \cos(3x)$$



Chloe's answer:

$$y = 3 \cos\left(\frac{1}{2}x\right)$$



Dean's answer:

$$y = \frac{1}{2} \cos(3x)$$

