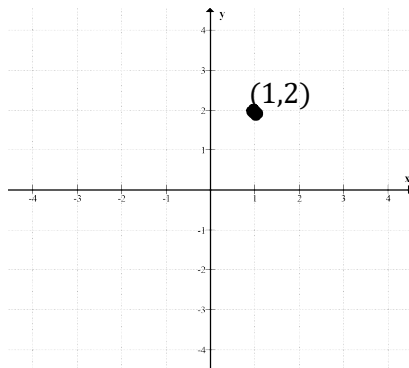


C12 - 1.1 - VHT Points HW



Point
 $(x, f(x)) = (1, 2)$

Perform the following operations on the point $(x, f(x))$ and state the new point and write in mapping notation. Draw the new point on the graph.

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

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

$$g(x) - 2 = f(x)$$

A vertical translation up 2

$$g(x) = f(x - 3)$$

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

A horizontal translation right 1

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

$$y + 4 = f(x + 2)$$

$$y + 7 = f(x + 5)$$

A vertical translation up 1 and
A horizontal translation left 5

Notice!

A horizontal translation left 5 and
A vertical translation up 1

C12 - 1.1 - VHT Function Notation $f(x)$ HW

Solve

$$f(x) = x^2$$

$$f(2) =$$

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

Find the new equation of $@(x)$; a transformation of $f(x)$ above. State the Transformation/s.

$$g(x) = f(x - 2)$$

$$h(x) = f(x + 1)$$

A horizontal translation left 4

$$p(x) = f(x) + 1$$

$$k(x) + 3 = f(x)$$

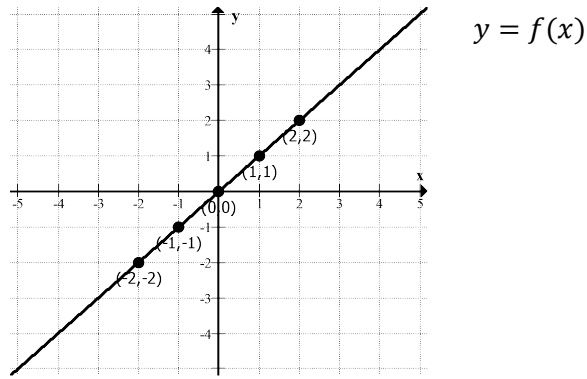
A vertical translation up 2

$$w(x) = f(x + 2) - 4$$

$$n(x) - 2 = f(x + 4)$$

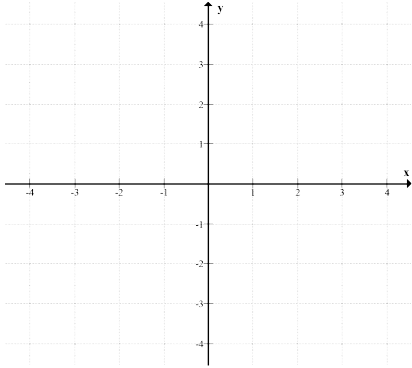
A vertical translation up 1 and
A horizontal translation left 5

C12 - 1.1 - VHT Graphs $y = HW$

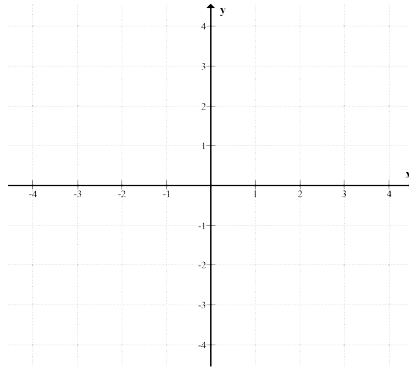


Perform the following operations on the graph $f(x)$ and draw the new graph.

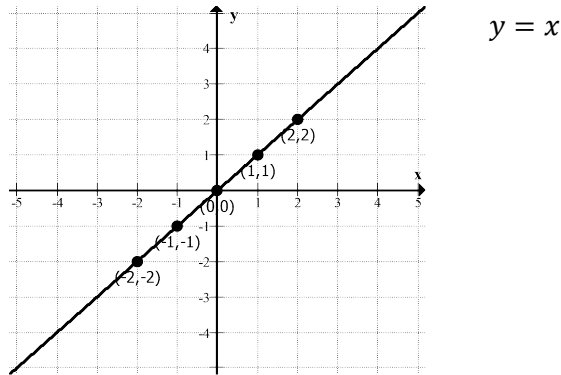
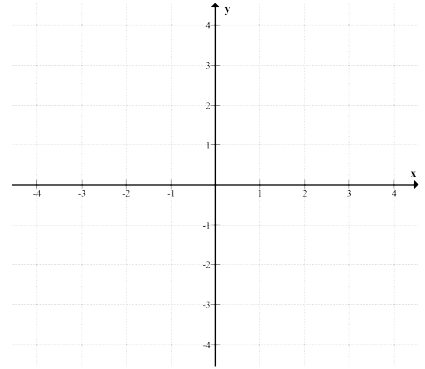
$$y = f(x) + 1$$



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

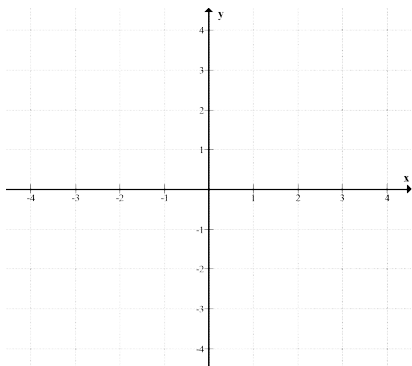


$$y = f(x - 1) + 3$$

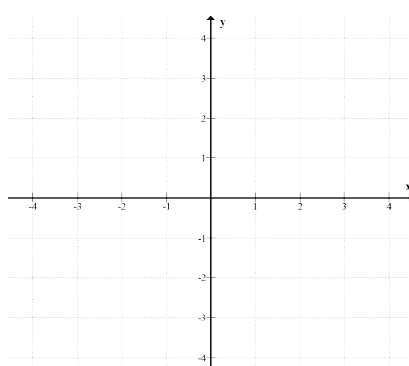


Perform the following operations on the equation and graph $y = x$ and draw the new graph.

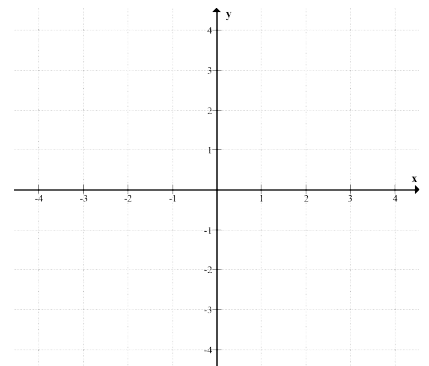
$$y = x \quad VT + 1$$



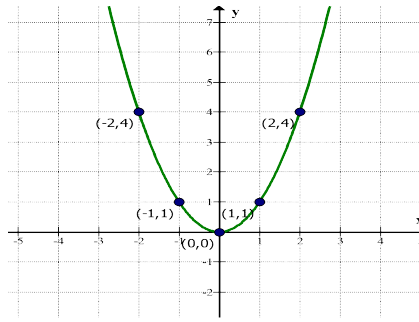
$$y = x \quad HT = -2$$



$$y = x \quad \begin{matrix} HT = +1 \\ VT = +3 \end{matrix}$$



C12 - 1.1 - VHT Graphs $y = HW$



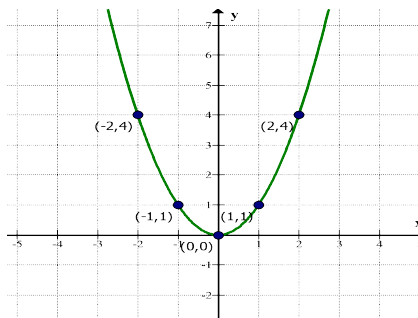
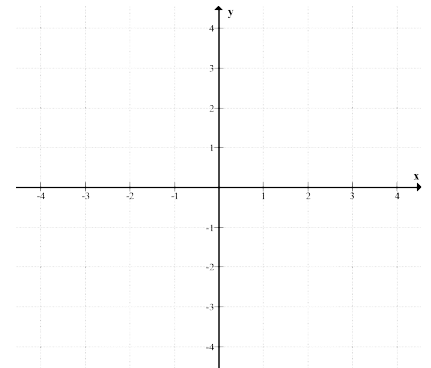
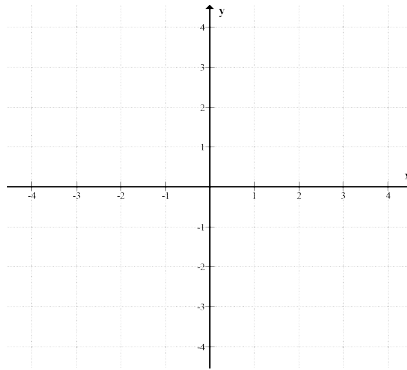
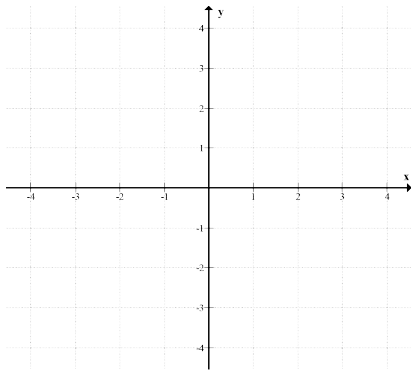
$$y = g(x)$$

Perform the following operations on the graph $g(x)$ and draw the new graph.

$$y - 1 = g(x)$$

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

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



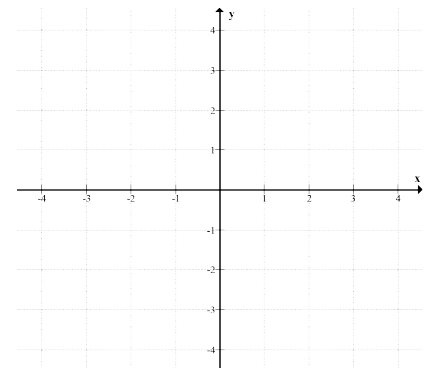
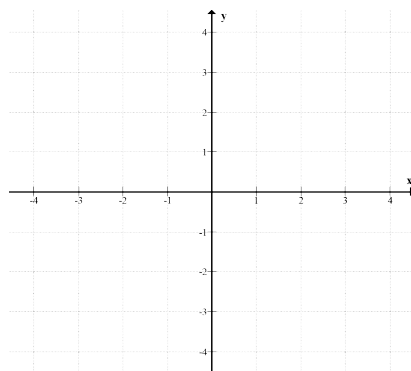
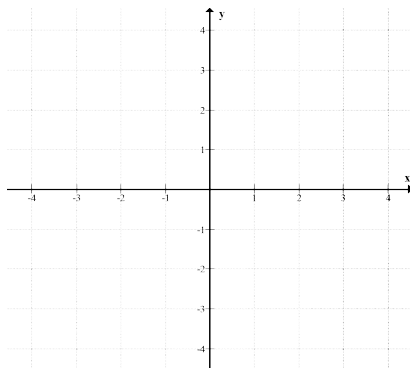
$$y = x^2$$

Perform the following operations on the equation $y = x^2$ and draw the new graph.

$$y = x^2 \quad VT + 1$$

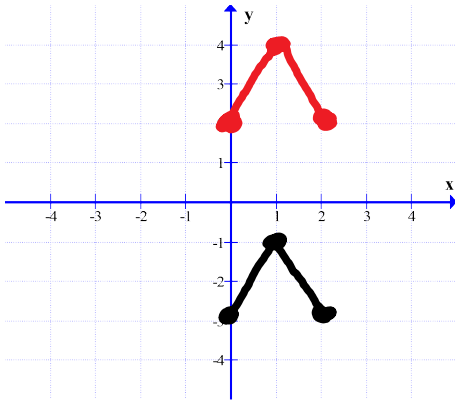
$$y = x^2 \quad HT = -2$$

$$y = x^2 \quad \begin{matrix} HT = +1 \\ VT = +3 \end{matrix}$$

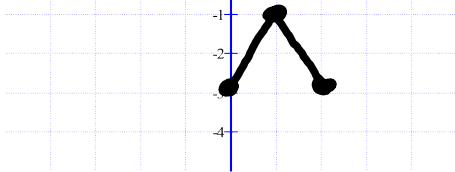


C12 - 1.1 - VHT Graph $f(x)$ HW

Find the transformed equation of $f(x)$ in all forms.

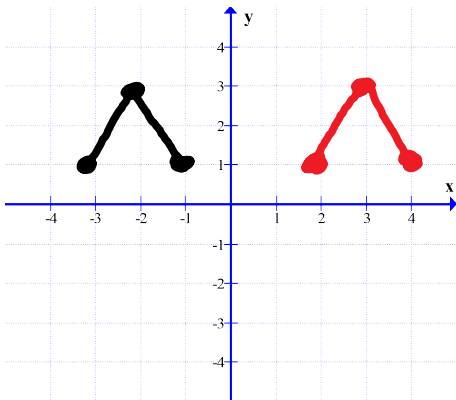


$$y = f(x)$$



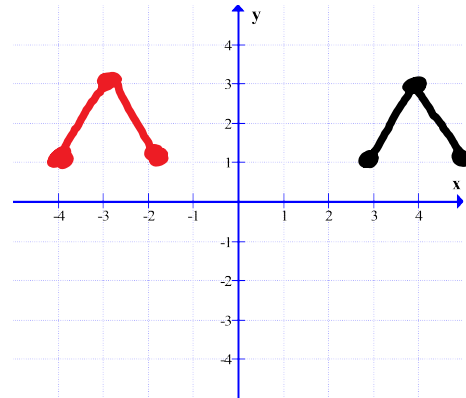
$$y = f(x) + k$$

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



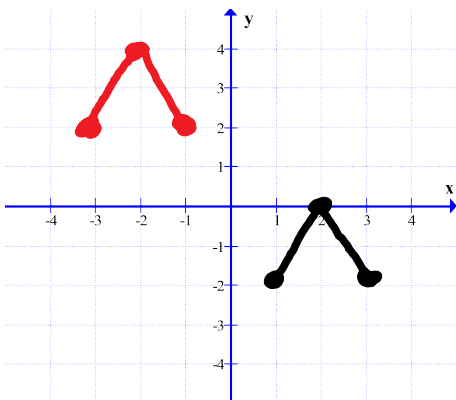
$$y = f(x)$$

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



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

$$y = f(x)$$



$$y = f(x)$$

$$y = f(x - h) + k$$

$$y - k = f(x - h)$$