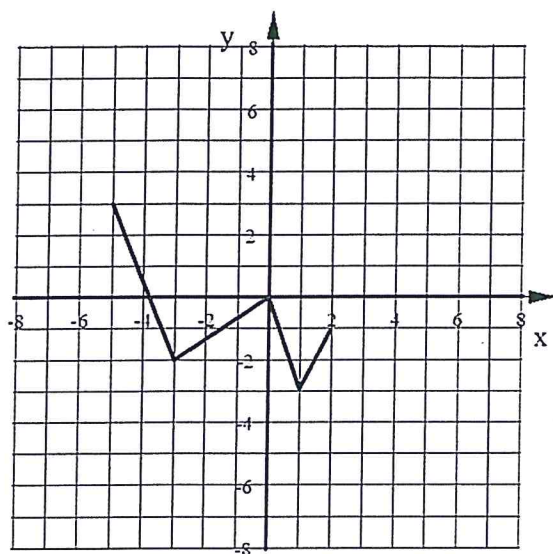


1. Below is the graph of  $y = f(x)$

Graph this transformation of this function:

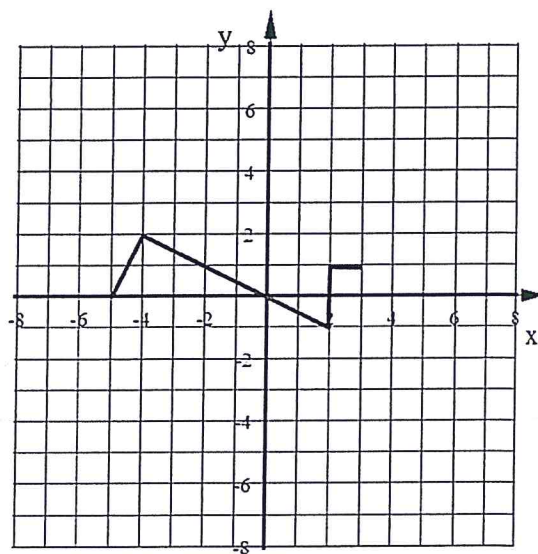
$$y = 2f(x - 4) - 1$$



2. Below is the graph of  $y = f(x)$

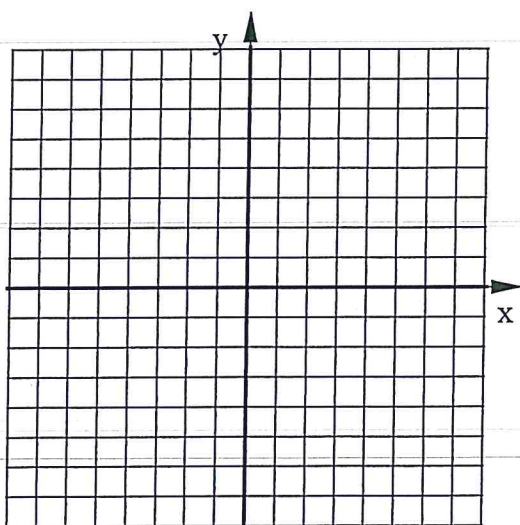
Graph this transformation of this function:

$$y = -3f(x + 2) + 4$$

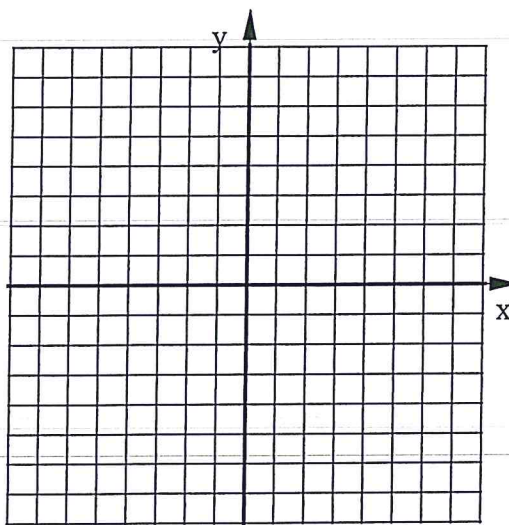


Graph each quadratic using at least five points.

3.  $y = 3(x + 2)^2 - 5$



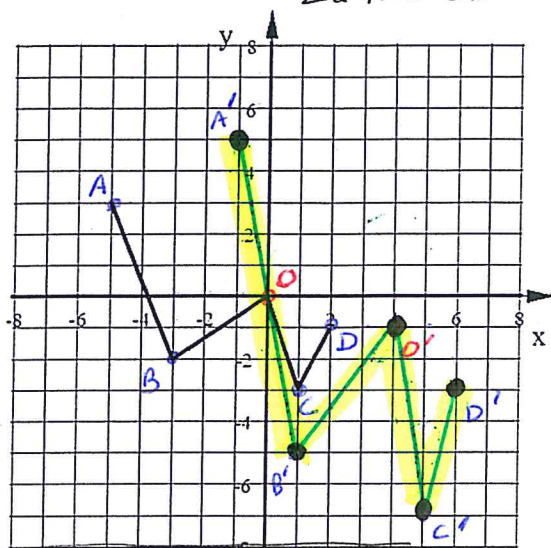
4.  $y = -2(x - 4)^2 + 1$



Answers

1. Below is the graph of  $y = f(x)$   
Graph this transformation of this function:  
 $y = 2f(x-4) - 1$

2x TALLER



$$\begin{array}{r} 3 \phantom{0} \\ \times 2 \phantom{0} \\ \hline 6 \phantom{0} \end{array}$$

$$\begin{array}{r} 6 \phantom{0} \\ \times 2 \phantom{0} \\ \hline 12 \phantom{0} \end{array}$$

$$\begin{array}{r} 0 \phantom{0} \\ \times 2 \phantom{0} \\ \hline 0 \phantom{0} \end{array}$$

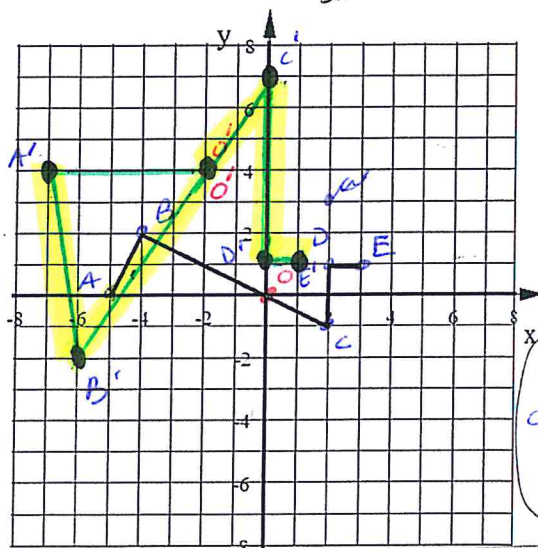
$$\begin{array}{r} 2 \phantom{0} \\ \times 2 \phantom{0} \\ \hline 4 \phantom{0} \end{array}$$

$$\begin{array}{r} 4 \phantom{0} \\ \times 2 \phantom{0} \\ \hline 8 \phantom{0} \end{array}$$

$$\begin{array}{r} 0 \phantom{0} \\ \times 2 \phantom{0} \\ \hline 0 \phantom{0} \end{array}$$

2. Below is the graph of  $y = f(x)$   
Graph this transformation of this function:  
 $y = -3f(x+2) + 4$

2 Left 4up.  
3x Taller & upside down



$$\begin{array}{r} 5 \phantom{0} \\ \times 3 \phantom{0} \\ \hline 15 \phantom{0} \end{array}$$

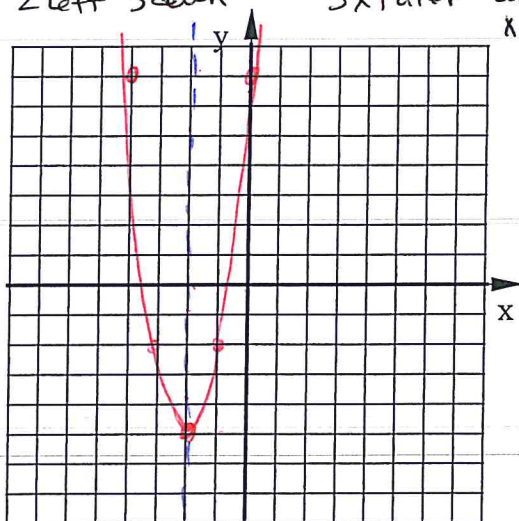
$$\begin{array}{r} 0 \phantom{0} \\ \times 3 \phantom{0} \\ \hline 0 \phantom{0} \end{array}$$

$$\begin{array}{r} 0 \phantom{0} \\ \times 3 \phantom{0} \\ \hline 0 \phantom{0} \end{array}$$

$$\begin{array}{r} 0 \phantom{0} \\ \times 3 \phantom{0} \\ \hline 0 \phantom{0} \end{array}$$

Graph each quadratic using at least five points.

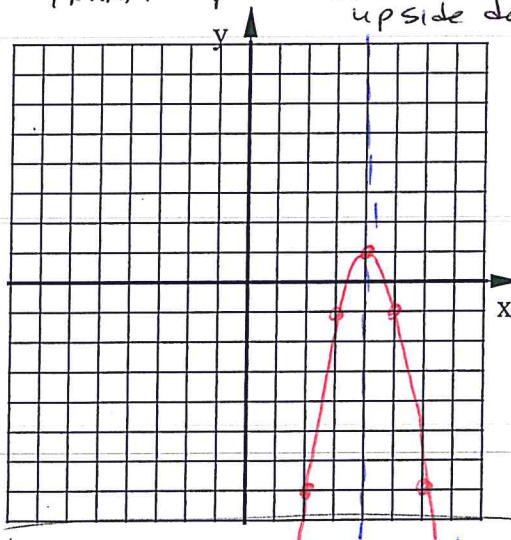
3.  $y = 3(x+2)^2 - 5$  Vertex  $(-2, -5)$   
2 left 5down 3xTaller LOS:  $x = -2$



$$\begin{array}{r} 1 \phantom{0} \\ \times 3 \phantom{0} \\ \hline 3 \phantom{0} \end{array}$$

$$\begin{array}{r} 2 \phantom{0} \\ \times 3 \phantom{0} \\ \hline 6 \phantom{0} \end{array}$$

4.  $y = -2(x-4)^2 + 1$  Vertex  $(4, 1)$   
4 right 1up 2x taller upside down LOS:  $x = 4$



$$\begin{array}{r} 1 \phantom{0} \\ \times 2 \phantom{0} \\ \hline 2 \phantom{0} \end{array}$$

$$\begin{array}{r} 2 \phantom{0} \\ \times 2 \phantom{0} \\ \hline 4 \phantom{0} \end{array}$$