

SUMMARY OF FUNCTION TRANSFORMATIONS

$$y = Af(B(x + h)) + k$$

The graph of $y = Af(B(x + h)) + k$ is a transformation of the graph of $y = f(x)$. The transformations can be done in the following order:

- A : The function stretches or compresses vertically by a factor of $|A|$. If A is negative, the function also reflects across the x -axis.
- B : The function stretches or compresses horizontally by a factor of $\frac{1}{|B|}$. If B is negative, the function also reflects across the y -axis.
- h : The function shifts horizontally by h units. If $h > 0$, the function shifts left. If $h < 0$, the function shifts right.
- k : The function shifts vertically by k units. If $k > 0$, the function shifts up. If $k < 0$, the function shifts down.

FIGURE 1

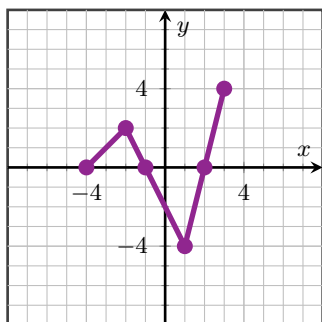


FIGURE 2

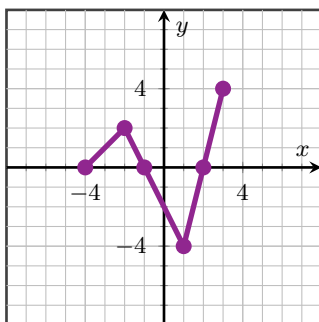


FIGURE 3

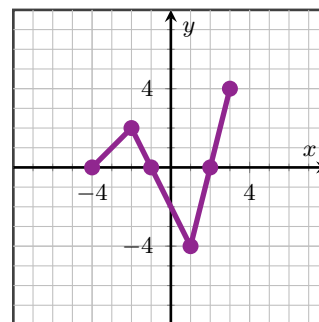


FIGURE 4

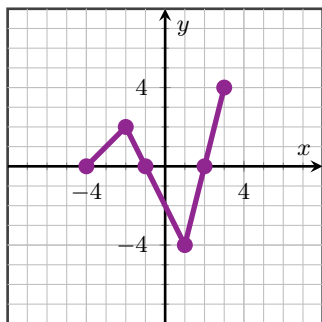


FIGURE 5

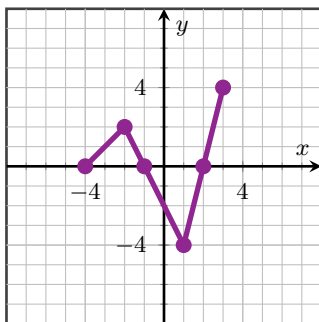


FIGURE 6

