

Exercise 7

Write a formula for the function obtained when the graph of $f(x) = |x|$ is shifted down 3 units and to the right 1 unit.

Solution

To shift the graph down 3 units, subtract 3 from the function.

$$y = |x| - 3$$

To also shift the graph to the right 1 unit, replace x with $x - 1$.

$$y = |x - 1| - 3$$

