

Transformations of Abs. Value

Describe each transformation.

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

Vertical shift down 3

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

Horizontal shift left 1

$$j(x) = 3|x - 2|$$

Hor. shift right 2, vert. stretch by 3

$$k(x) = \frac{1}{4}|x| + 1$$

Vert. compression by $\frac{1}{4}$, shift up 1

$$m(x) = |2x|$$

Horizontal compression by $\frac{1}{2}$

$$n(x) = |\frac{1}{4}x|$$

Horizontal stretch by 4

$$p(x) = -|x|$$

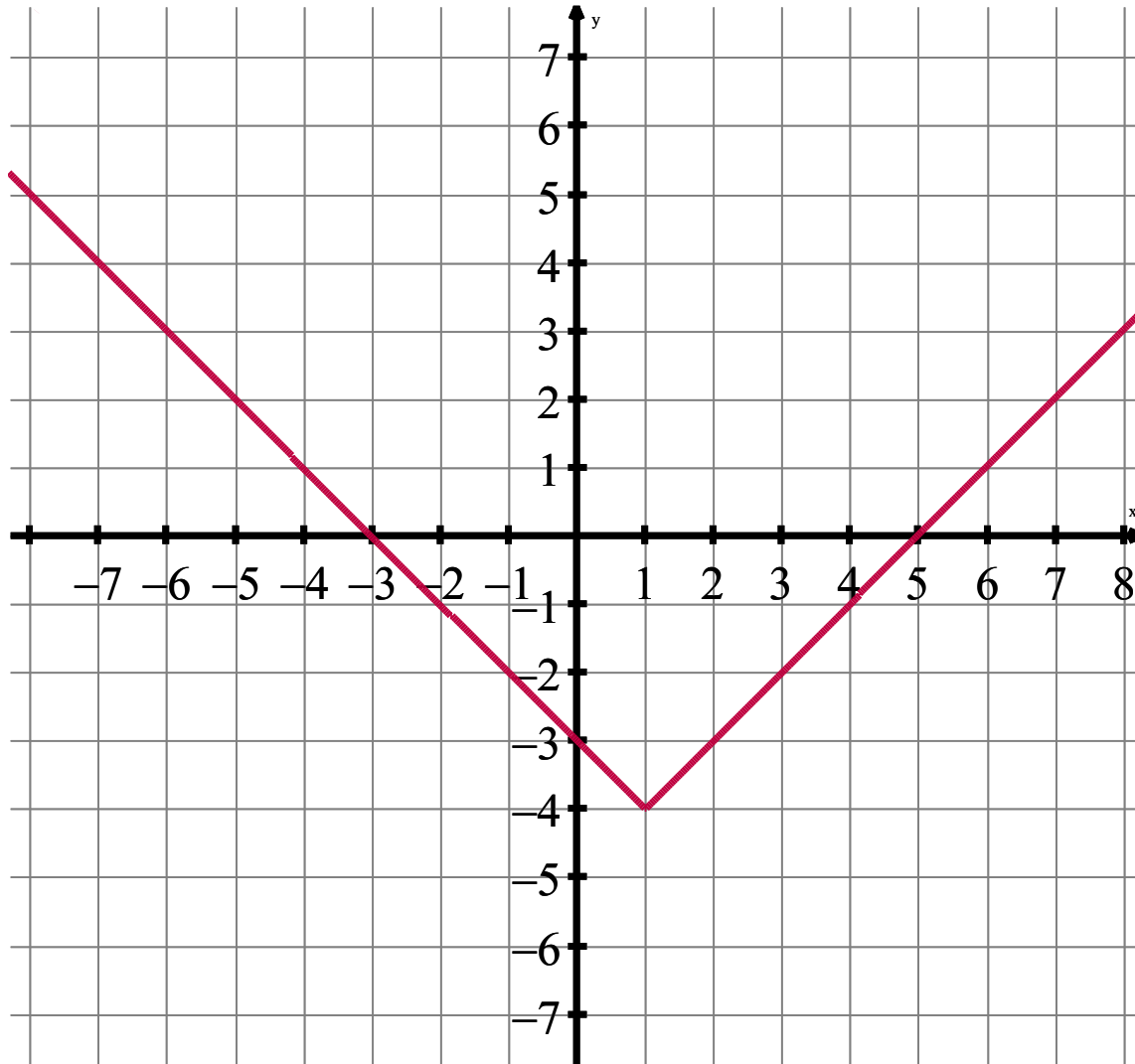
Reflect over x-axis

$$q(x) = |-x|$$

Reflect over y-axis

Describe the transformation and graph the function

$$f(x) = |-x + 1| - 4$$



Simplify $f(x)$:

$$f(x) = |-(x - 1)| - 4$$

Transformations:

-Shift down 4

-Shift right 1

-Horizontal reflection

What type of transformation(s) will affect the...

Range: Vertical shift, vertical reflection

End Behavior: Vertical reflection

Domain: None. The domain is always $(-\infty, \infty)$