

ALGEBRA II
Chapter 2 section 7
Use Absolute Value Functions and Transformations
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FOCUS:

How do the values of a , h , and k affect the graph of $y = a \cdot f(x - h) + k$ in relation to the graph of $y = f(x)$?

VOCAB:

Absolute Value Function: _____

Vertex of an Absolute Value Graph: _____

Transformation: _____

Translation: _____

Reflection: _____

WARM – UP:

Evaluate the expression for $x = -2$.

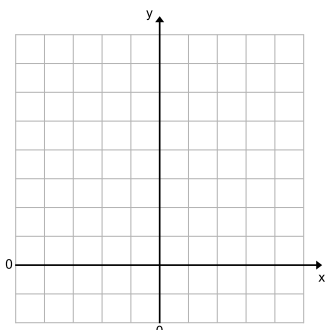
1. $|x + 5|$ _____ 2. $|x - 4| + 8$ _____

3. Ted drove 10 blocks looking for an address. He then had to drive half a block in reverse to reach it. What expression gives the distance driven?

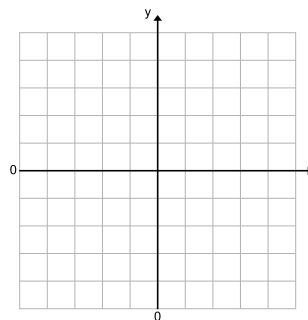
NOTES:

Graph. Compare with $y = |x|$.

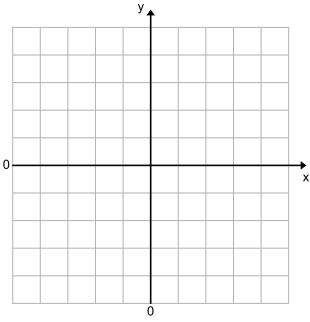
$y = |x| + 3$



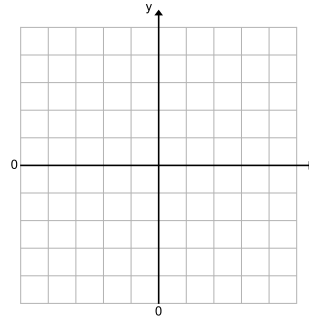
$y = |x + 3|$



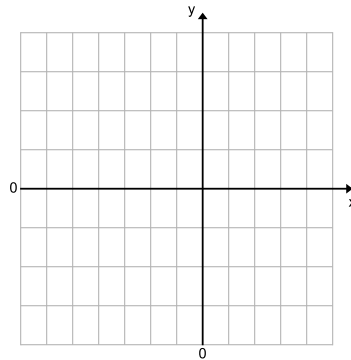
$$y = -2|x|$$



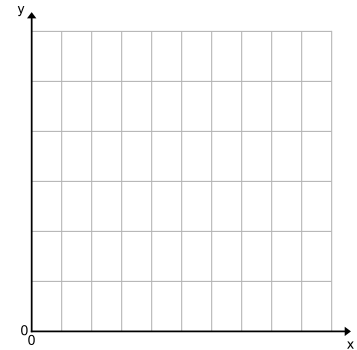
$$y = \frac{1}{3}|x|$$



$$y = \frac{1}{4}|x + 3| - 2$$

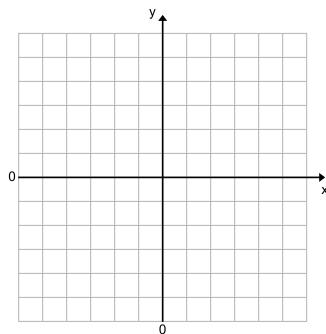


A landscaper sketches a design for a triangular shrub protector on graph paper with points at (0, 0) and (10, 0) and a vertex at (5, 6). Write an equation for the shrub protector.

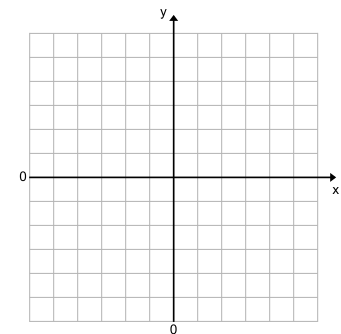


The graph of the function $y = f(x)$ has endpoints at (-3, -3) & (3, -6) and a vertex at (0, 0). Sketch the graph of $f(x)$ on each graph and the given function.

$$y = -\frac{1}{3} \cdot f(x)$$



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



Let's see if you comprehended what we worked on in class...

Try _____ for homework