

Exercise 40

In Exercises 29–40, test for symmetry with respect to each axis and to the origin.

$$|y| - x = 3$$

Solution

Replacing x with $-x$ changes the equation, so there's no symmetry with respect to the y -axis.

$$|y| - (-x) = 3 \quad \rightarrow \quad |y| + x = 3$$

Replacing y with $-y$ does not change the equation, so there is symmetry with respect to the x -axis.

$$| -y | - x = 3 \quad \rightarrow \quad |y| - x = 3$$

Replacing x with $-x$ and y with $-y$ changes the equation, so there's no symmetry with respect to the origin.

$$| -y | - (-x) = 3 \quad \rightarrow \quad |y| + x = 3$$

