

Exercise 33

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

$$xy = 4$$

Solution

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

$$(-x)y = 4 \quad \rightarrow \quad -xy = 4$$

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

$$x(-y) = 4 \quad \rightarrow \quad -xy = 4$$

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

$$(-x)(-y) = 4 \quad \rightarrow \quad xy = 4$$

