Symmetry about the $y$-axis

The graph of $y = f(x)$ is **symmetric about the $y$-axis** if and only if

$$f(-x) = f(x) \quad \text{for all } x \text{ in the domain.}$$

Here are three intuitive ways to view this symmetry:

- Positive and negative values of $x$ yield the same results.
- The left and right “sides” of the graph are “mirror images” of each other.
- If you reflect the curve about the $y$-axis, the graph is unchanged.