

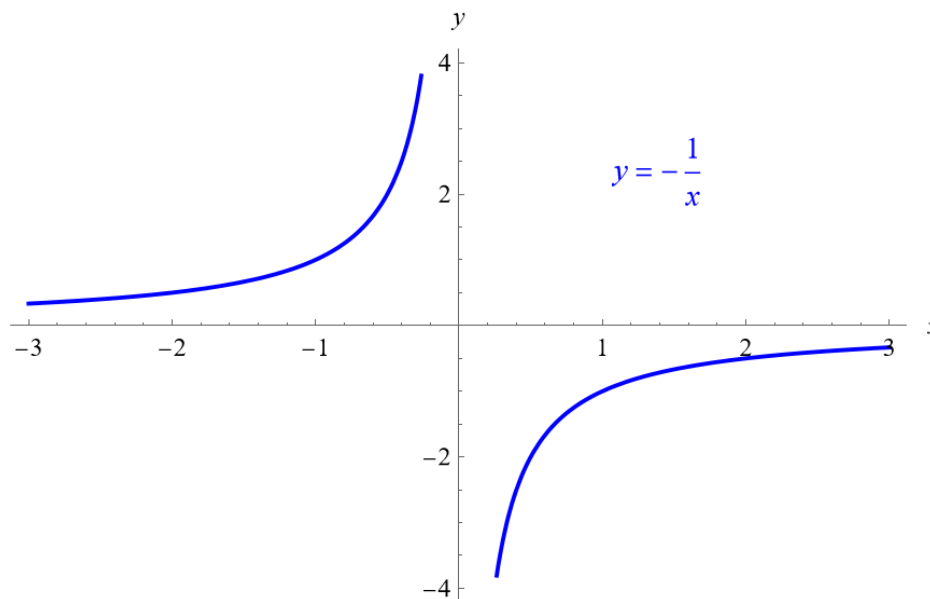
**Exercise 39**

Graph the functions in Exercises 37–46. What symmetries, if any, do the graphs have? Specify the intervals over which the function is increasing and the intervals where it is decreasing.

$$y = -\frac{1}{x}$$

**Solution**

The function is graphed below versus  $x$ .



It is symmetric with respect to the origin. The function is never decreasing and increasing on  $(-\infty, 0) \cup (0, \infty)$ .