

Exercise 46

For the following exercises, make a table to confirm the end behavior of the function.

$$f(x) = -x^3$$

Solution

Plug in several values of x into the function and see what the corresponding values of y are.

x	y
-3	27
-2	8
-1	1
0	0
1	-1
2	-8
3	-27

The variable is raised to an odd power and the coefficient is negative, so $f(x) \rightarrow \infty$ as $x \rightarrow -\infty$ and $f(x) \rightarrow -\infty$ as $x \rightarrow \infty$.