Exercise 47

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

$$f(x) = x^4 - 5x^2$$

Solution

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

x	y
-4	176
-3	36
-2	-4
-1	-4
0	0
1	-4
2	-4
3	36
4	176

The leading term has a variable raised to an even power and the coefficient is positive, so $f(x) \to \infty$ as $x \to \pm\infty$.