

Name: Key
October 27, 2015
MAC 1105.1A26
Cyr

Quiz 9

You must show all work to receive full credit!!

Problem 1. (2 pts) Let $f(x) = \frac{x^2 - 3}{x^3}$.

(a) Determine whether f is an even function, an odd function, or neither.

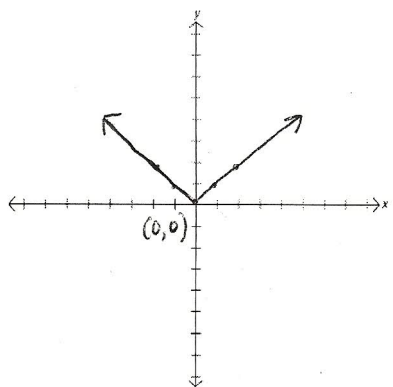
$$f(-x) = \frac{(-x)^2 - 3}{(-x)^3} = \frac{x^2 - 3}{-x^3} = -\left(\frac{x^2 - 3}{x^3}\right) = -f(x).$$

Since $f(-x) = -f(x)$, f is an odd function.

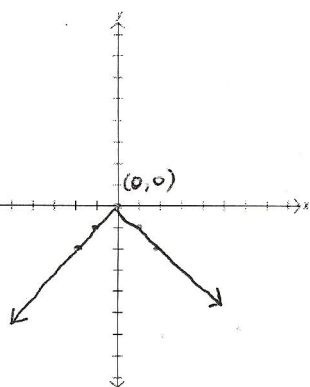
(b) Based on your answer in part (a), what kind of symmetry will f have?

Symmetric with respect to the origin.

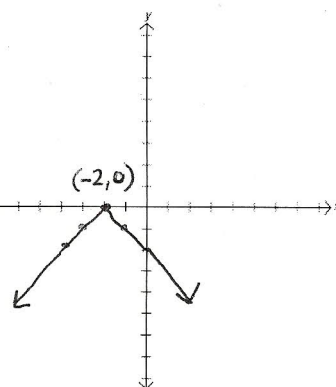
Problem 2. (3 pts) Sketch the graph of $g(x) = -|x + 2|$. Start with the parent graph and make note of each transformation.



Parent $y = |x|$



$y = -|x|$
Flip across x-axis



$g(x) = -|x + 2|$
Shift two units left