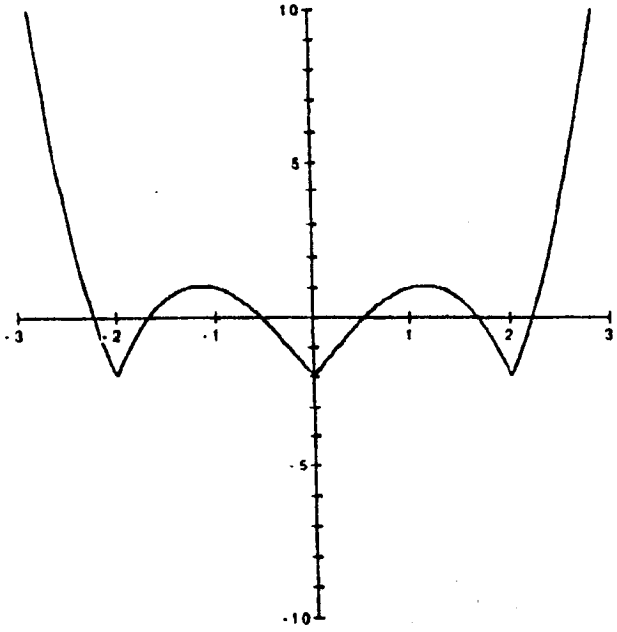
Math 21A
Kouba
Even and Odd Functions

DEFINITIONS: 1. Function f is <u>even</u> if $f(-x) = f(x)$.

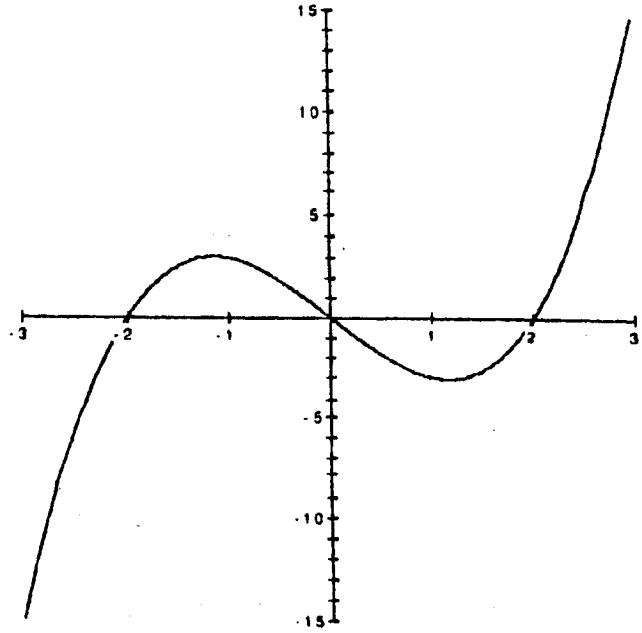
2. Function f is <u>odd</u> if $f(-x) = -f(x)$.

EXAMPLES:

f is even



f is odd



NOTE: 1. An even function is symmetric about the y-axis.

2. An odd function is symmetric about the origin.

PROBLEMS: 1. Show that $f(x) = x^4 - 5x^2 + 3$ is an even function.

2. Show that $f(x) = x\sqrt{x^2 + \cos x}$ is an odd function.