

## Curve Sketching

See “Guidelines for Analyzing the Graph of a Function” on page 209

Let us do the Big Blue handout

[If you are absent, then the handout is in our bin.]

Some more problems to consider:

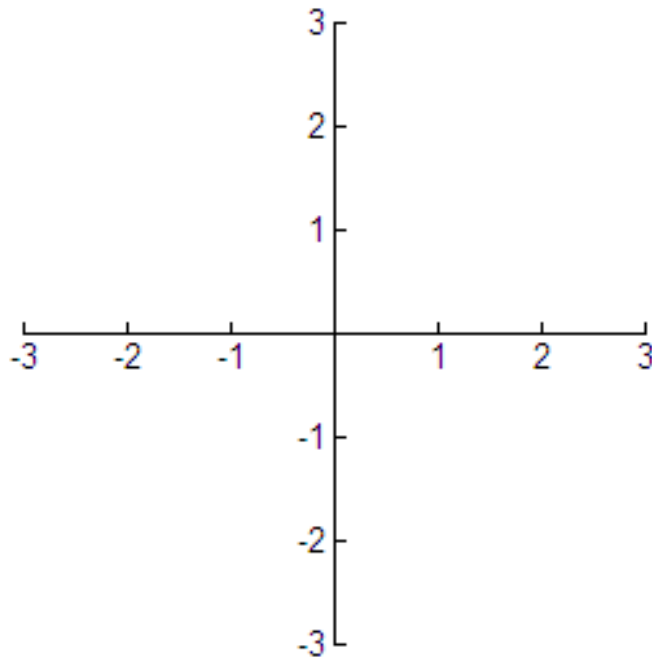
Let  $f$  be a function that is even and continuous on the closed interval  $[-3, 3]$ . The function  $f$  and its derivatives have the properties indicated in the table below:

$x$	0	$0 < x < 1$	1	$1 < x < 2$	2	$2 < x < 3$
$f(x)$	1	positive	0	neg	-1	neg
$f'(x)$	0	negative	0	neg	und	pos
$f''(x)$	0	negative	0	neg	und	pos

(a) Find the  $x$ -coordinate of each point at which  $f$  attains an extreme value. Justify your answer.

(b) Find the  $x$ -coordinate of each point of inflection on the graph of  $f$ . Justify your answer.

(c) Sketch the graph



Homework: page 215 #7, 19, 23, 25, 31[don't be afraid to use your TI to find critical numbers[values] or possible points of inflection