

Calculus:

Homework  
12/18-12/22

due: Tuesday: read pg. 282

1. Graph  $y = x^4 - 6x^2 + 3$  by using a table of values which includes  $y, y'$ , and  $y''$ .
2. A function  $f$  is continuous on  $[-3,3]$  such that  $f(-3) = 4$  and  $f(3) = 1$ . The functions  $f'$  and  $f''$  have the following properties:

$x$	$-3 < x < -1$	$x = -1$	$-1 < x < 1$	$x = 1$	$1 < x < 3$
$f'(x)$	+	DNE	-	0	-
$f''(x)$	+	DNE	+	0	-

- a. What are the x-coordinates of all absolute maximum and minimum points of  $f$  on  $[-3,3]$ ?
- b. What are the x-coordinates of all points of inflection of  $f$  on  $[-3,3]$ ?
- c. Sketch a graph that satisfies the given properties of  $f$ .

Wednesday: review sheet

Thursday: review sheet

on: Friday: test