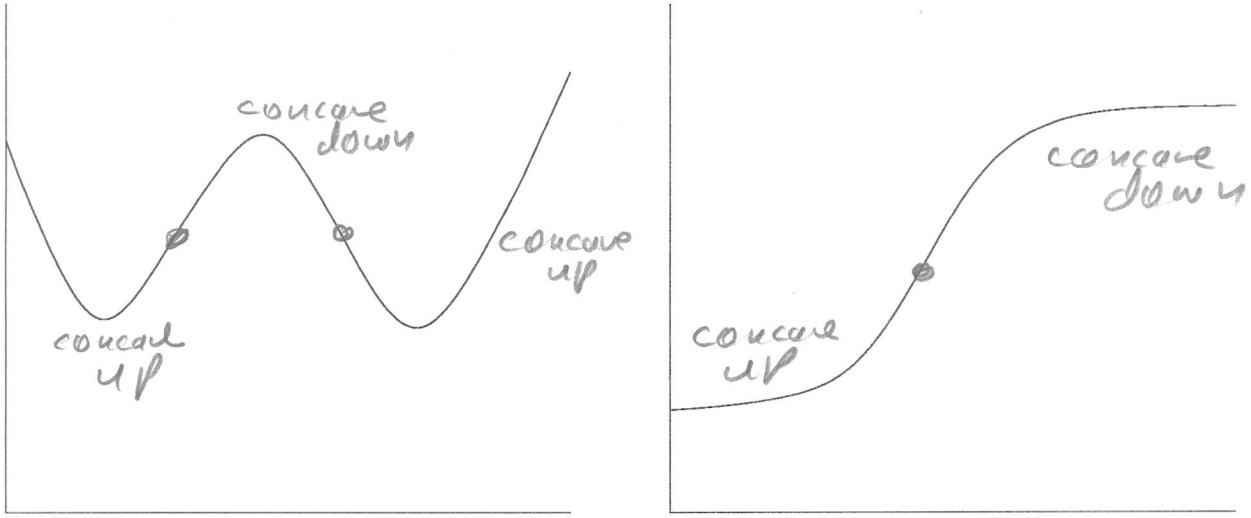
Mathematics 122

Quiz #25 Name: Key

You must show your work to get full credit.

1. Label the inflection points on the following two graphs.



2. Let $f(x) = 2x^3 - 6x^2 + 4x + 2$. Find the inflection point(s) on $y = f(x)$ and give both the x and y coordinates.

Inflection point(s) are (1, 3)

$f'(x) = 6x^2 - 12x + 4$

$f''(x) = 12x - 12 = 0$ when $12x = 12$ $x = 1$

$f''(x) = 12(x-1)$

− − − | + + +

concave down | concave up

so inflection point is at $x = 1$

$y = f(1) = 2(1)^3 - 6(1)^2 + 4(1) + 3$

$= 2 - 6 + 4 + 3$

$= 9 - 6 = 3$