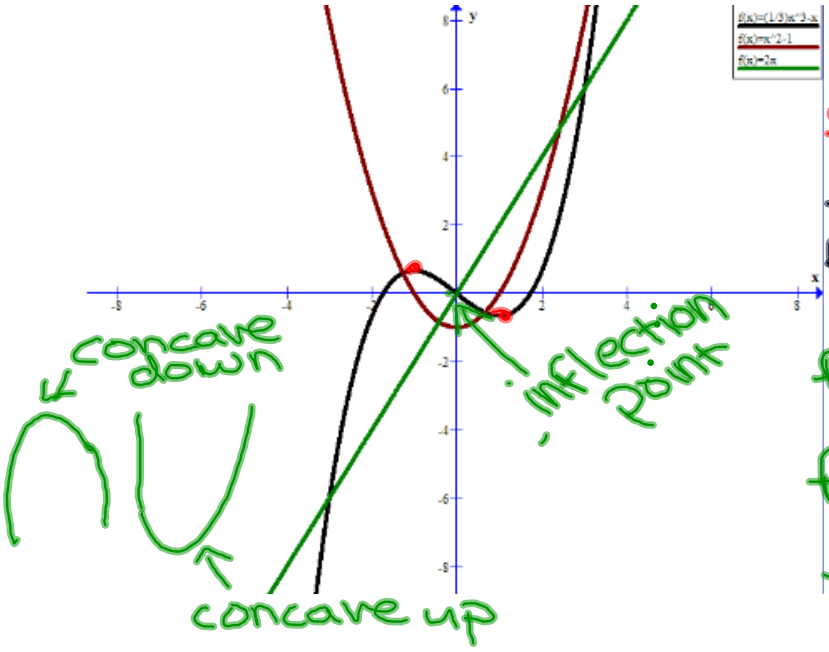
$$f(x) = \frac{1}{3}x^3 - x$$

$$f'(x) = x^2 - 1$$

$$f''(x) = 2x$$

$f'(x) = 0$: mins, max

$f' > 0$ = increasing



$f'(x)=0$: mins, max
$f'(x)>0$: increasing
$f'(x)<0$: decreasing

$f''(x)=0$: inflection point
$f''(x)<0$: concave down
$f''(x)>0$: concave up

Second derivative rule

given $f'(c)=0$

$f''(c)>0$: maximum
$f''(c)<0$: minimum

extrema on concave down is a maximum