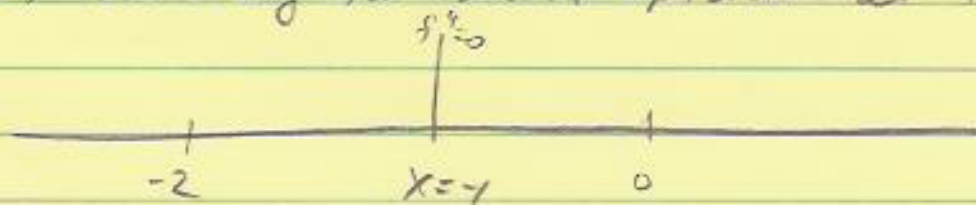


10 (Continued) Part II Concavity

$$f''(x) = \frac{d}{dx}(x^2 + 2x - 8) = 2x + 2 = 2(x+1) = 0$$

$\Rightarrow$ boundary for concave up/down at $x = -1$



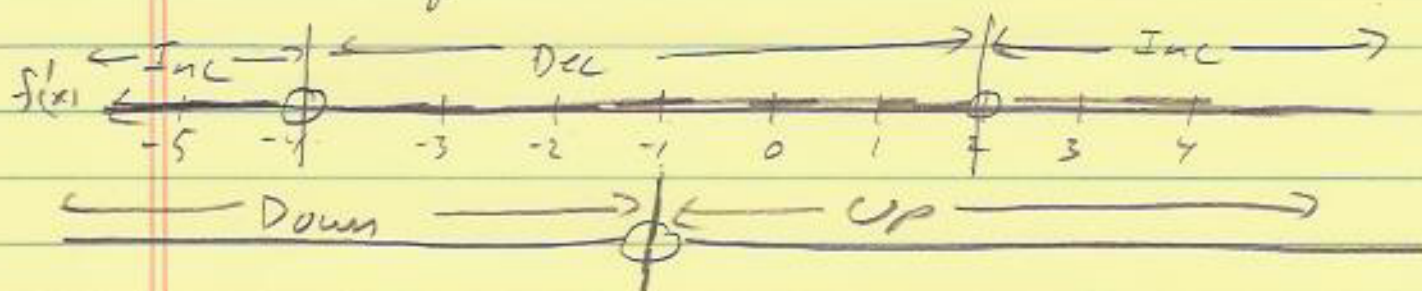
$$f''(-2) = 2(-2+1) = (-) \Rightarrow \text{Concave Down at } x = -2$$

$\Rightarrow$ Concave down for $(-\infty < x < -1)$

$$f''(0) = 2(0+1) = (+) \Rightarrow \text{Concave Up at } x = 0$$

$\Rightarrow$ Concave Up for $(-1 < x < +\infty)$

Summary



$\Rightarrow$ Answer:

Increasing and Concave Up for $x > 2$