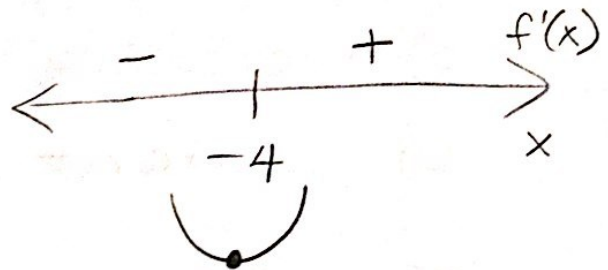


Ex 1) Find the critical values.
 Determine intervals of increasing/decreasing. Identify max/min.

***** a) $f(x) = x^2 + 8x + 10$

$$f'(x) = 2x + 8 = 0$$

$$x = -4$$



Decreasing: $(-\infty, -4)$
 Increasing: $(-4, \infty)$
 MIN: $(-4, -6)$

$$f(-4) = (-4)^2 + 8(-4) + 10$$

$$= 16 - 32 + 10$$

$$= -6$$

***** b) $f(x) = \frac{x+3}{x^2}$

$$f'(x) = \frac{x^2 - (x+3)(2x)}{(x^2)^2}$$

$$f'(x) = \frac{x^2 - 2x^2 - 6x}{x^4}$$

$$f'(x) = \frac{-x^2 - 6x}{x^4} = \frac{-x(x+6)}{x^4} = \frac{-(x+6)}{x^3}$$

