

#12

$$9x^2 + 3x - 2 \geq 0$$

$$(3x + 2)(3x - 1) \geq 0$$

$$3x + 2 = 0$$

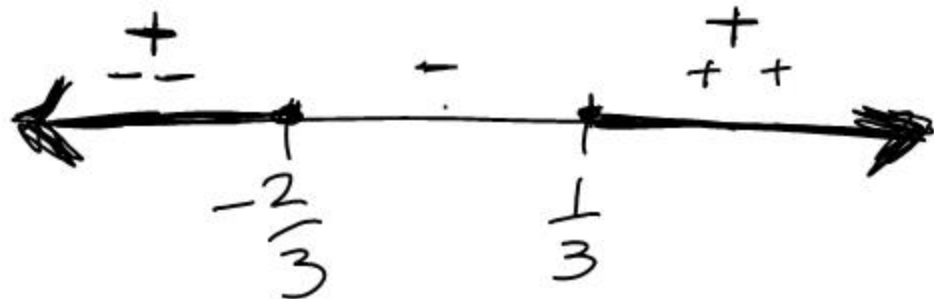
$$3x = -2$$

$$x = -\frac{2}{3}$$

$$3x - 1 = 0$$

$$3x = 1$$

$$x = \frac{1}{3}$$



$$\left(-\infty, -\frac{2}{3}\right] \cup \left[\frac{1}{3}, \infty\right)$$

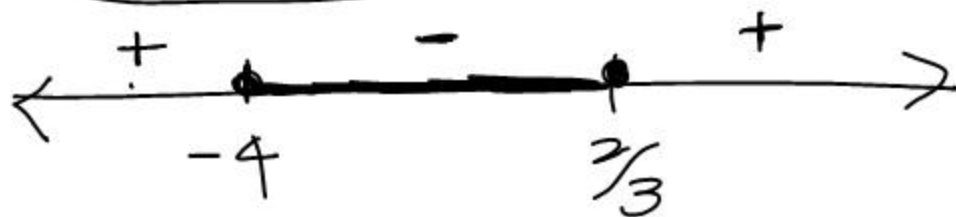
$$\#11 \quad 3x^2 + 10x - 8 \leq 0$$

$$(3x - 2)(x + 4) \leq 0$$

$$3x - 2 = 0$$

$$3x = 2$$

$$x = \frac{2}{3}$$



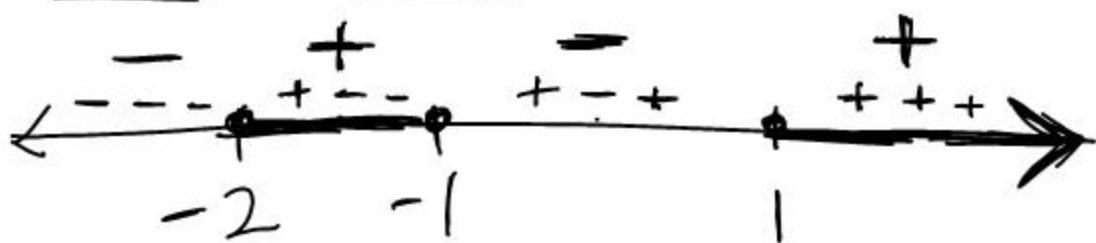
$$\left[-4, \frac{2}{3}\right]$$

$$\#35 \quad x^3 + 2x^2 - x - 2 \geq 0$$

$$x^2(x+2) - 1(x+2) \geq 0$$

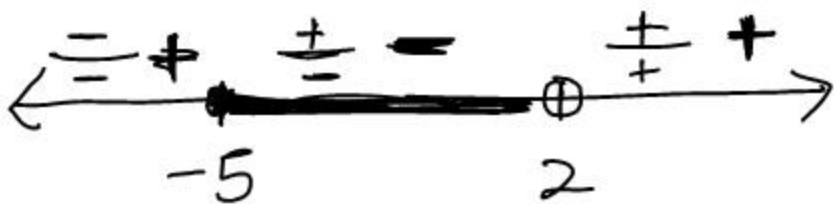
$$(x+2)(x^2-1) \geq 0$$

$$(x+2)(x-1)(x+1) \geq 0$$



$$[-2, -1] \cup [1, \infty)$$

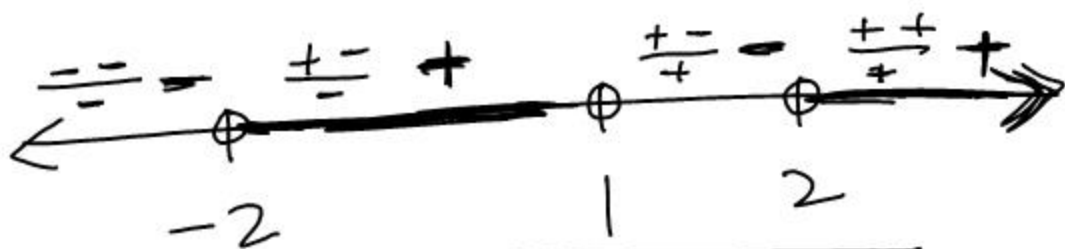
$$\text{Ex.} \quad \frac{x+5}{x-2} \leq 0$$



$$[-5, 2)$$

$$\#x. \quad \frac{x^2 - 4}{x - 1} > 0$$

$$\frac{(x+2)(x-2)}{x-1} > 0$$



$$\boxed{(-2, 1) \cup (2, \infty)}$$

HW p. 366 # 36, 40, 44, 49, 53, 54
Test Review # 1-5

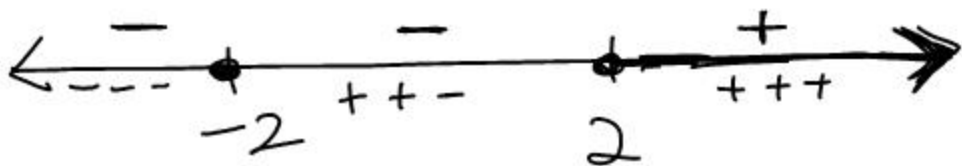
TEST: Monday October 2nd

#36 $x^3 + 2x^2 - 4x - 8 \geq 0$

$$x^2(x+2) - 4(x+2) \geq 0$$

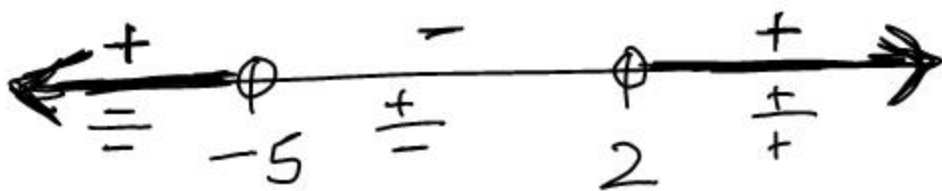
$$(x+2)(x^2 - 4) \geq 0$$

$$(x+2)(x+2)(x-2) \geq 0$$



$$\{-2\} \cup [2, \infty)$$

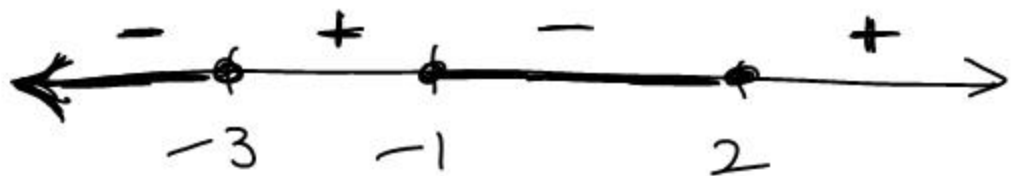
#44 $\frac{x+5}{x-2} > 0$



$$(-\infty, -5) \cup (2, \infty)$$

#54

$$\frac{(x+3)(x-2)}{x+1} \leq 0$$



$$(-\infty, -3] \cup [-1, 2]$$