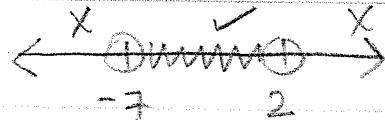


Notes Section 2.6 - Polynomial Inequalities

• solve each inequality.

$$\begin{aligned}
 1. \quad & x^2 + 5x + 6 < 20 \\
 & x^2 + 5x - 14 < 0 \\
 & (x+7)(x-2) < 0 \\
 & -7, 2
 \end{aligned}$$



$$(-7, 2)$$

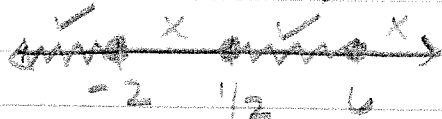
$$\begin{aligned}
 2. \quad & x^2 + 12x + 36 < 0 \\
 & (x+6)(x+6) < 0 \\
 & -6
 \end{aligned}$$



$$[-6]$$

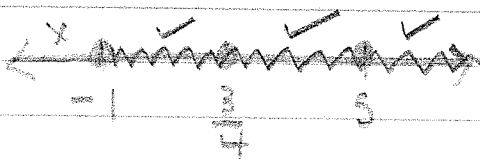
$$\begin{aligned}
 3. \quad & 2x^3 - 9x^2 \leq 20x - 12 \\
 & 2x^3 - 9x^2 - 20x + 12 \leq 0 \\
 & -2, 6, 1/2
 \end{aligned}$$

$$(x+2)(x-6)(2x-1) \leq 0$$



$$(-\infty, -2] \cup [1/2, 6]$$

$$\begin{aligned}
 4. \quad & (y-5)^2 (y+1)(4y-3)^4 \geq 0 \\
 & -1, 3/4
 \end{aligned}$$



$$[-1, 3/4]$$