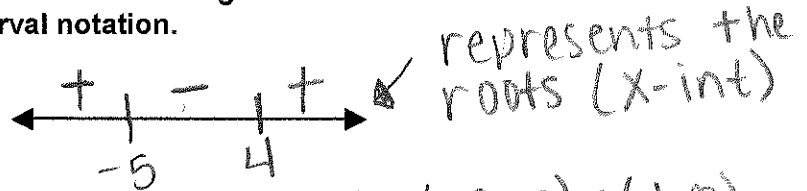
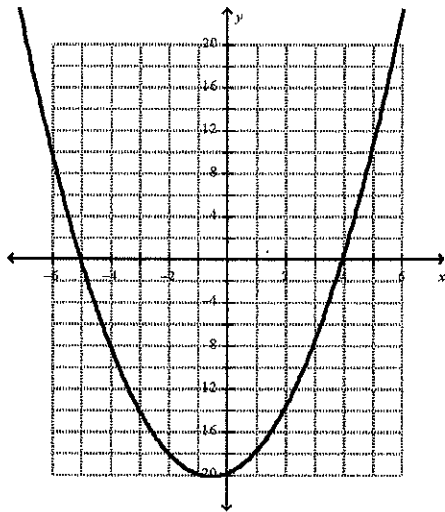


Name: _____ Date: _____ Period: _____

3.4 – Notes - Solve Quadratic Inequalities

Use the graph of the given function to plot solutions on the given number line for the related inequalities. Then write the solutions in interval notation.

1. $y = x^2 + x - 20$



a. $x^2 + x - 20 > 0$ (pos) $(-\infty, -5) \cup (4, \infty)$

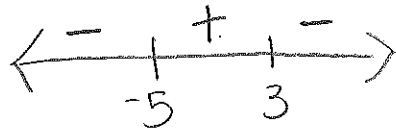
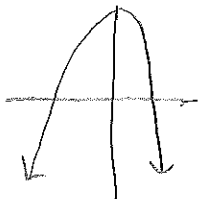
b. $x^2 + x - 20 < 0$ (neg) $(-5, 4)$

c. $x^2 + x - 20 \geq 0$ [pos] $(-\infty, -5] \cup [4, \infty)$

d. $x^2 + x - 20 \leq 0$ [neg] $[-5, 4]$

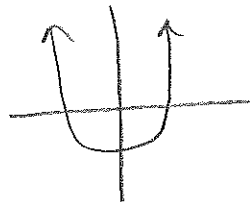
2. $-x^2 - 2x + 15 > 0$

$(-5, 3)$



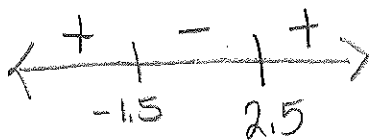
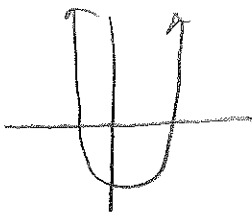
3. $x^2 - 9 \geq 0$

$[-3, 3]$



4. $4x^2 - 4x - 15 < 0$

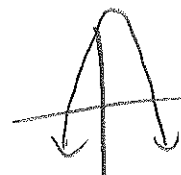
$(1.5, 2.5)$



5. $-x^2 + 3x \leq -10$

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

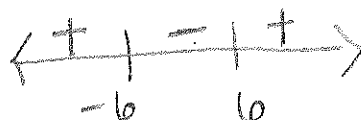
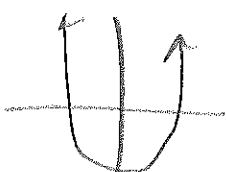
$-x^2 + 3x + 10 \leq 0$



6. $x^2 \leq 36$

$[-6, 6]$

$x^2 - 36 \leq 0$



7. $-x^2 - 6x \leq 9$

$(-\infty, \infty)$

