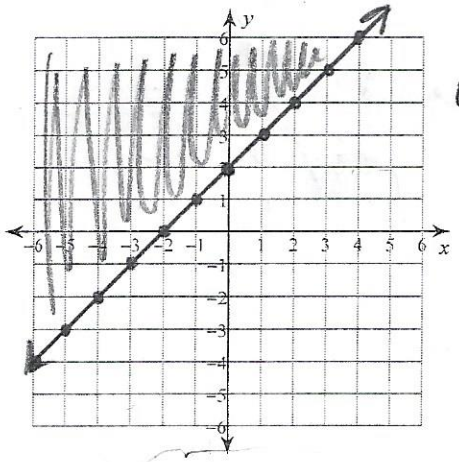
Algebra 2 Name Key

Linear and Absolute Value Inequalities

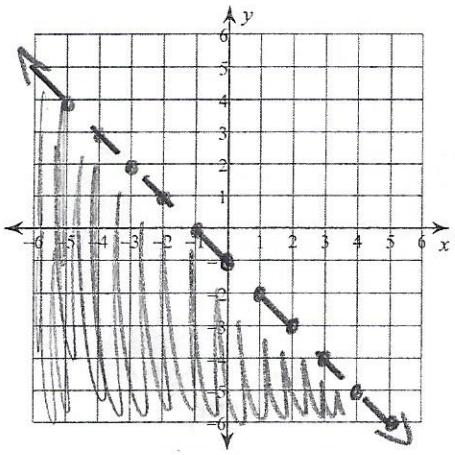
Date _____ Period ____

Sketch the graph of each linear inequality.

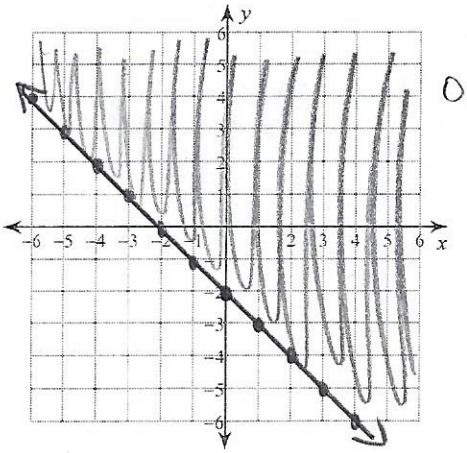
1) $y \geq x + 2$



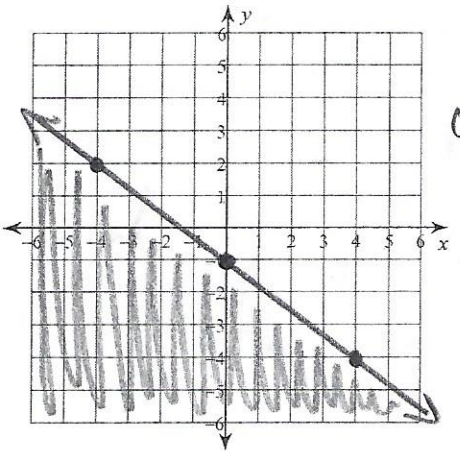
2) $y < -x - 1$



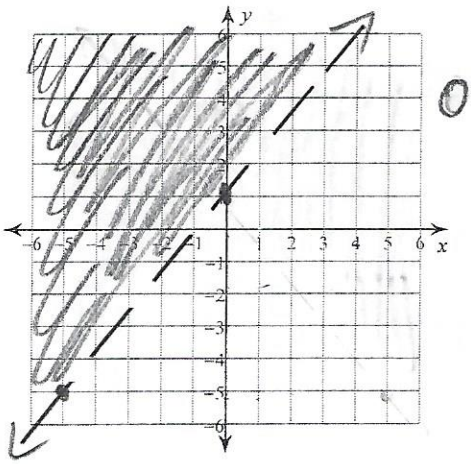
3) $y \geq -x - 2$



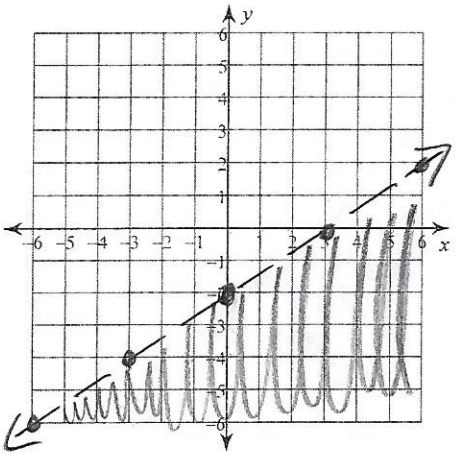
4) $y \leq -\frac{3}{4}x - 1$



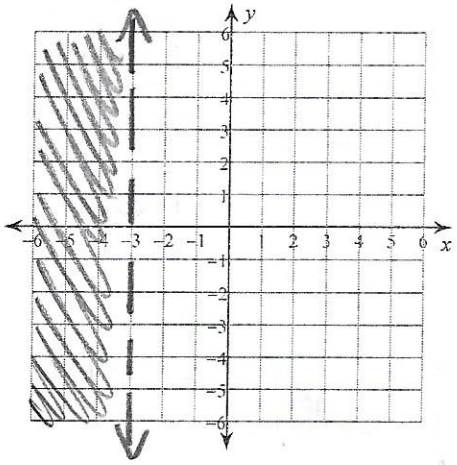
5) $y > \frac{6}{5}x + 1$



6) $y < \frac{2}{3}x - 2$



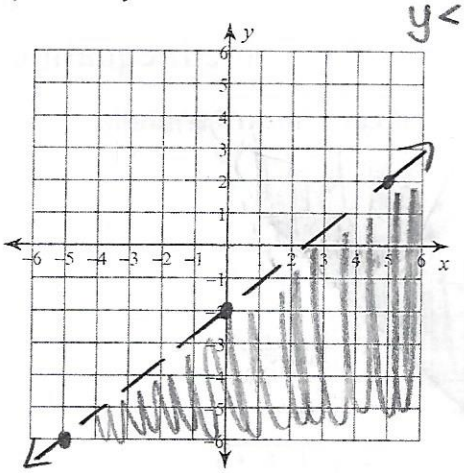
7) $x < -3$



8) $4x - 5y > 10$

$\frac{-5y}{-5} > \frac{-4x+10}{-5}$ $\quad -5$

$y < \frac{4}{5}x - 2$

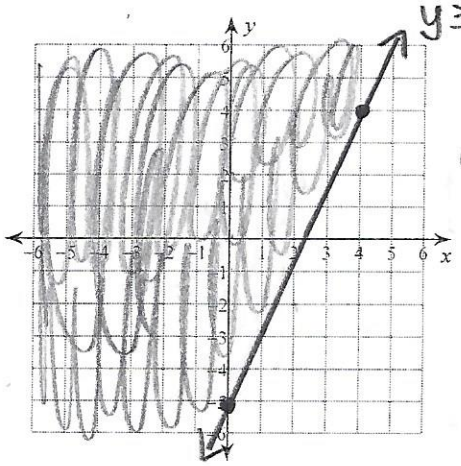


$0 > 10$

9) $9x - 4y \leq 20$

$\frac{-4y}{-4} \leq \frac{-9x+20}{-4}$ $\quad -4$

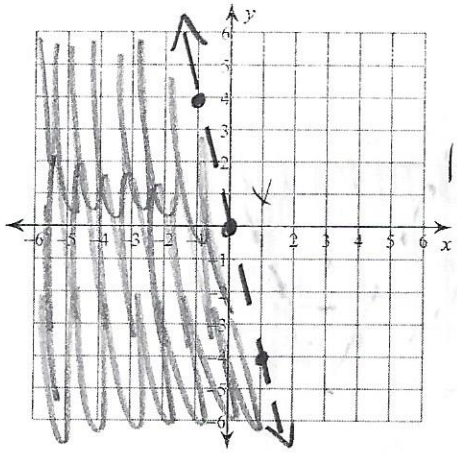
$y \geq \frac{9}{4}x - 5$



$0 \leq 20$

10) $4x + y < 0$

$y < -4x + 0$

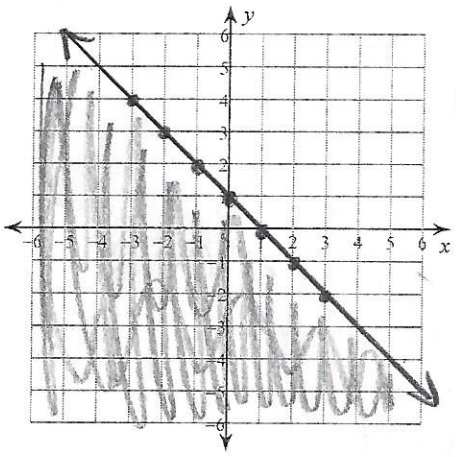


$(1,1)$

$1 < -4$

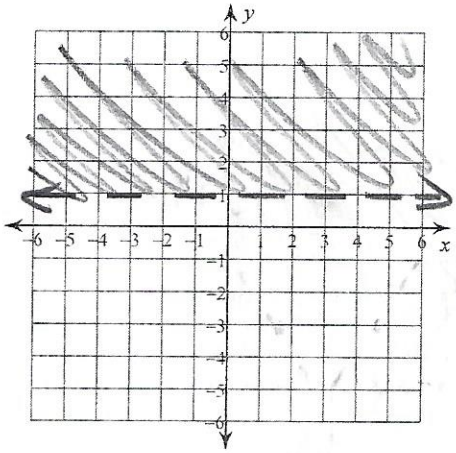
11) $x + y \leq 1$

$y \leq -x + 1$



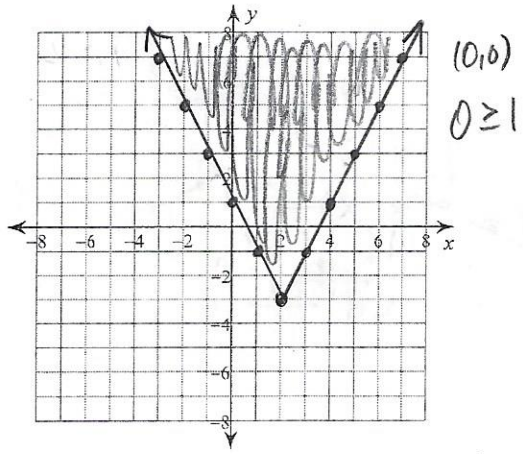
$0 \leq 1$

12) $y > 1$

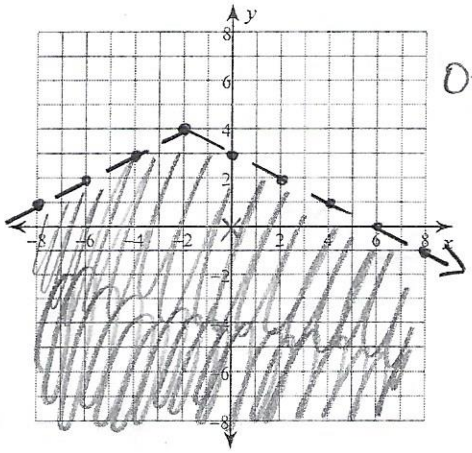


Graph the following inequalties.

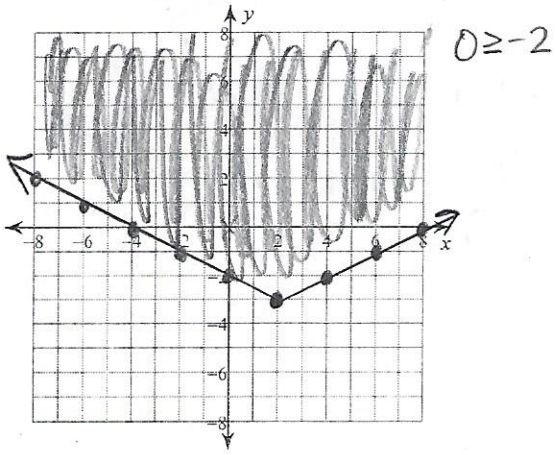
13) $y \geq 2|x-2|-3$



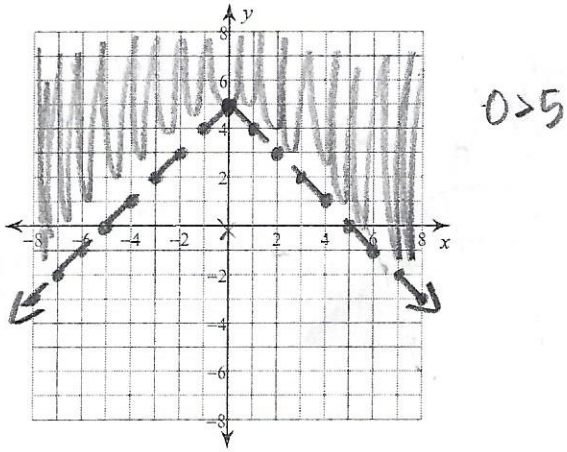
14) $y < -\frac{1}{2} \cdot |x+2| + 4$



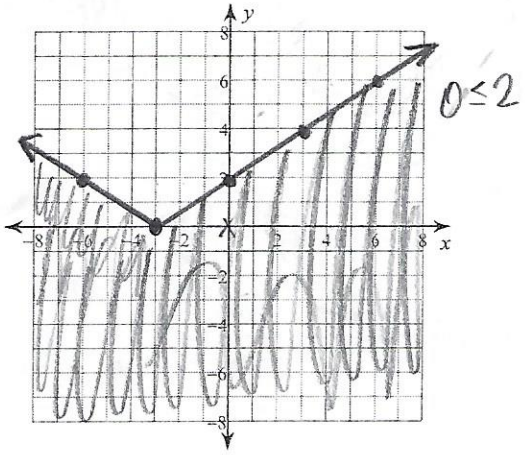
15) $y \geq \frac{1}{2} \cdot |x-2| - 3$



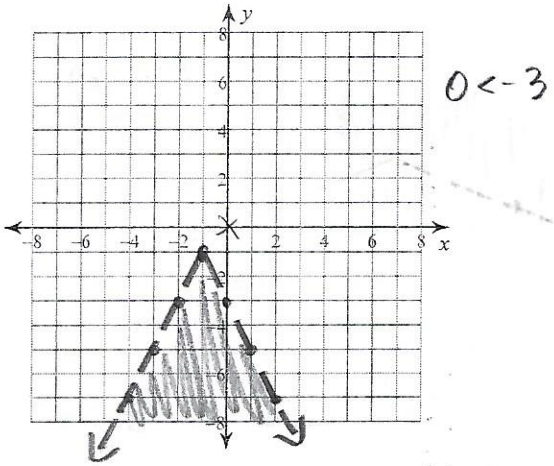
16) $y > -|x| + 5$



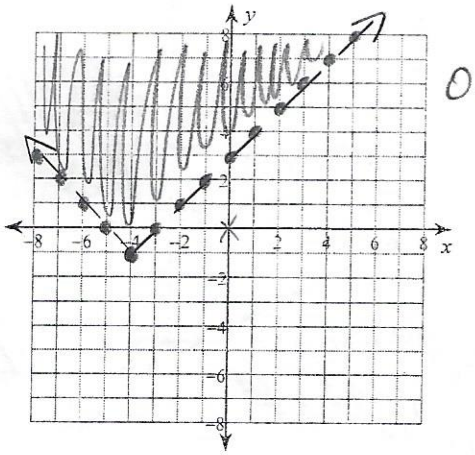
17) $y \leq \frac{2}{3} \cdot |x+3|$



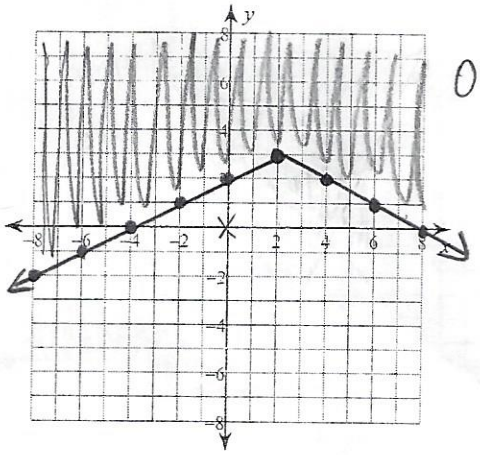
18) $y < -2|x+1| - 1$



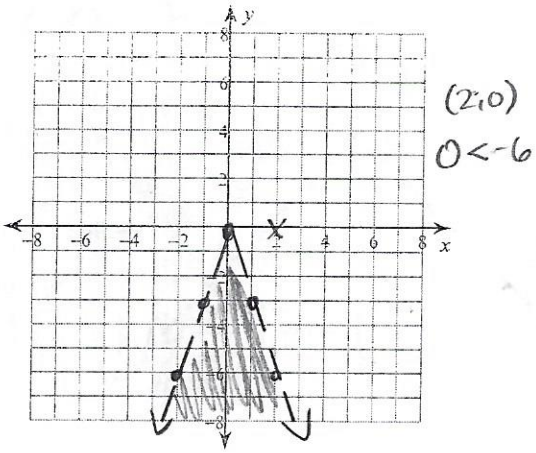
19) $y > |x+4| - 1$



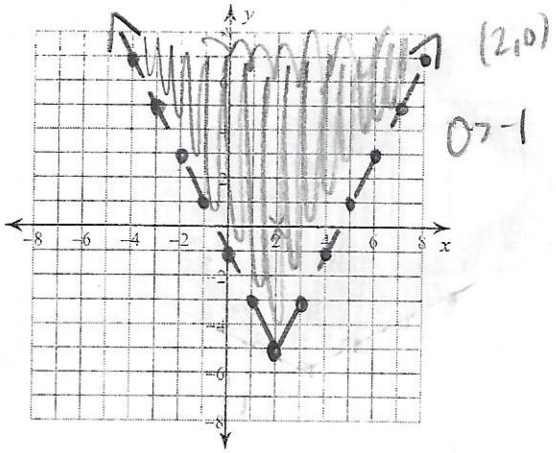
20) $y \geq -\frac{1}{2} \cdot |x-2| + 3$



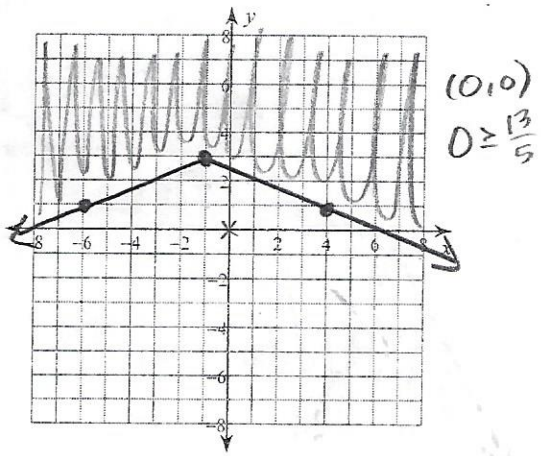
21) $y < -3|x|$



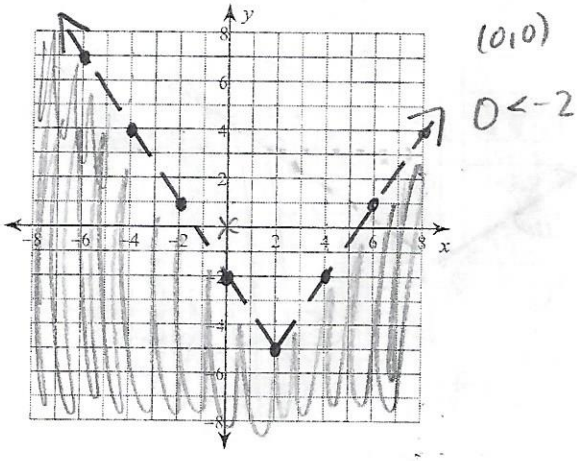
22) $y > 2|x-2| - 5$



23) $y \geq -\frac{2}{5} \cdot |x+1| + 3$



24) $y < \frac{3}{2} \cdot |x-2| - 5$



Algebra 2

Name_____

Factoring Review

Date_____ Hour____

Factor each completely.

1) $25m^2 - 9$

$(5m+3)(5m-3)$

2) $8a^2 - 50$

$2(4a^2-25)$

$2(2a+5)(2a-5)$

3) $16x^2 - 9$

$(4x+3)(4x-3)$

4) $64r^2 - 36$

$4(16r^2-9)$

$4(4r+3)(4r-3)$

5) $16r^2 - 36$

$4(4r^2-9)$

$4(2r+3)(2r-3)$

6) $25r^2 - 1$

$(5r+1)(5r-1)$

7) $36x^2 - 16$

$4(9x^2-4)$

$4(3x+2)(3x-2)$

8) $9m^2 - 1$

$(3m+1)(3m-1)$

9) $4n^2 - 100$

$4(n^2-25)$

$4(n+5)(n-5)$

10) $8p^2 - 2$

$2(4p^2-1)$

$2(2p+1)(2p-1)$