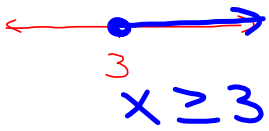
Adv Alg 2 Summer Worksheet #3 Name _____

1. Write the equation of the line passing through the points (12,-4) and (3,15) in slope-intercept form. $y = -\frac{19}{9}x + \frac{64}{3}$	2. Write the equations of the line passing through the points (3,-17) and (-6, 4) in point-slope form. $y+17 = -\frac{7}{3}(x-3)$ or $y-4 = -\frac{7}{3}(x+6)$	3. Solve and graph the solution on a number line. Then state the solution. $2x - 5 \geq 1$ *or* $-3x + 1 \leq -20$  $x \geq 3$
4. Solve and graph the solution on a number line. Then state the solution. $4a + 5 > 11a + 12$ *and* $13 - 14a \leq 13 - 3a$ $\varnothing$	5. Solve and graph the solutions on a number line. $-\lvert x + 3\rvert \geq 2$ $\varnothing$	6. Solve using the quadratic formula. $4 + 9x^2 - 12x = 0$ $x = \frac{2}{3}$
7. Solve using the zero product property. $8x^2 + 2x = 3$ $x = \frac{1}{2}$ or $x = \frac{-3}{4}$	8. Solve and graph the solutions on a number line. $\lvert 2x - 1\rvert = 3$  $x = 2$ or $x = -1$	9. Factor completely : $6n^2 - 7n - 3$ $(2n-3)(3n+1)$
10. Factor completely : $5b^2 + 5b - 30$ $5(b-2)(b+3)$	11. Solve the system of equations. Write the solution as an ordered pair. $x = 2y + 8$ $3x - 6y = 24$ infinite solutions	12. Solve the system of inequalities by graphing. $x + 2y \leq 4$ $3x - y \geq -2$