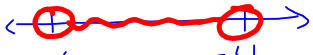
Adv Alg 2 Summer Worksheet #4 Name _____

1. Write the equation of the line passing through the points (9,14) and (17,21) in slope-intercept form. $y = \frac{7}{8}x + \frac{49}{8}$	2. Write the equations of the line passing through the points (16,3) and (-4,7) in point-slope form. $y-7=-\frac{1}{5}(x+4)$ or $y-3=-\frac{1}{5}(x-16)$	3. Solve and graph the solution on a number line. Then state the solution. $3x+2 \geq -8+x$ *or* $-7x+14 \geq 21$ All Real Numbers
3. Solve and graph the solution on a number line. Then state the solution. $5-2y \leq -7$ *and* $5y > -4+y$  6 $y \geq 6$	5. Solve and graph the solutions on a number line. $\lvert x+5\rvert + 3 < 4$  -6 -4 $-6<x<-4$	6. Solve using the quadratic formula. $3x+2=-x^2$ $x=-1$ or $x=-2$
7. Solve using the zero product property. $4x^2+2=-9x$ $x=-\frac{1}{4}$ or $x=-2$	8. Solve and graph the solutions on a number line. $\left\lvert\frac{1}{2}x-4\right\rvert = 1$ $x=10$ or $x=6$	9. Factor completely : $2n^2+13n-7$ $(2n-1)(n+7)$
10. Factor completely : $4a^2-20a-56$ $4(a-7)(a+2)$	11. Solve the system of equations. Write the solution as an ordered pair. $3x-5y=12$ $6x+y=5$ $\left(\frac{37}{33}, -\frac{19}{11}\right)$	12. Solve the system of inequalities by graphing. $3x-2y \geq 6$ $y > -x$