Pre-AP Geometry Algebra Skills Review
NO CALCULATORS. Show work.

Name _____
Due Date _____ Period _____

Simplify

1) $(x + 4)(2x - 1)$

2) $3(y-4)^2$

Solve each system by <u>substitution</u>. Write each answer as an ordered pair.

3) $x + y = 3$
$x - y = 5$

4) $2x + 2y = -4$
$-x + 3y = 6$

5) $5x + 7y = 1$
$4x - 2y = 16$

Solve each system by <u>elimination</u>. Write each answer as an ordered pair.

6) $x + 2y = 5$
$x - y = -1$

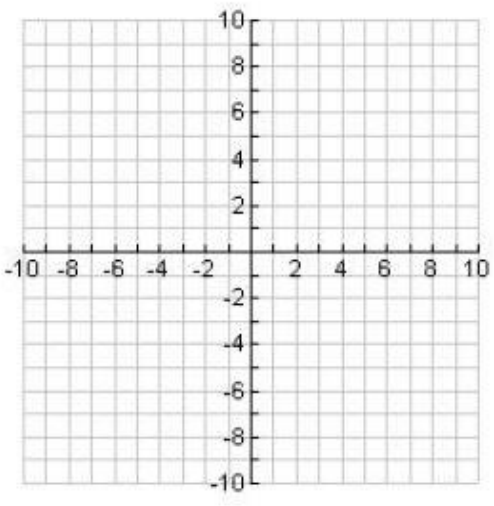
7) $3x - 6y = -3$
$2x - 3 = y$

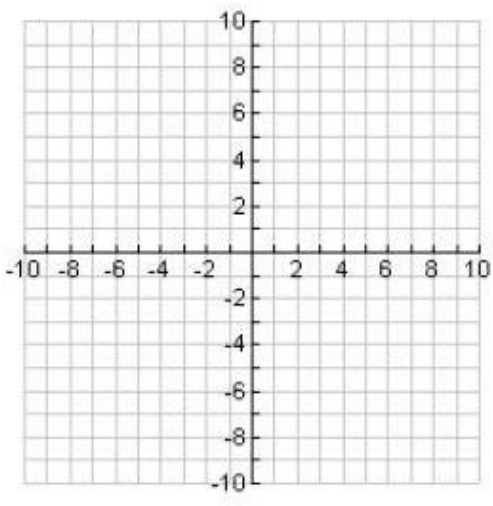
8) $8x - 5y = 14$
$10x - 2y = 9$

Solve each system by <u>graphing</u>. Write each answer as an ordered pair

9) $x - y = 1$
$-2x + y = 2$

10) $x - 2y = -3$
$x = y - 1$





Solve each equation by factoring.

11) $c^2 - 3c = 10$

12) $4z^2 - 9 = 0$

13) $a^2 - a - 12 = 0$

14) $n^2 + 10n + 21 = 0$

15) $8y^2 = 32$

16) $2x^2 - 7x = 15$

Simplify each radical expression. (answer will not be a decimal)

17) $\sqrt{27}$

18) $\sqrt{150}$

19) $\sqrt{80}$

20) $2\sqrt{8}$

Distance formula = $\sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$

Find the distance between the two given points.

21) $(-2, 3), (4, -7)$

Midpoint formula = $\left(\frac{x_1+x_2}{2} + \frac{y_1+y_2}{2}\right)$

Find the midpoint between the two points.

22) $(16, -2), (-7, 4)$

23) $(-8, -5), (9, -6.5)$