Geometry 1-2 Name _____

Assignment Period _____ Date _____

Algebra Review #2

1) What are two ways to write a linear equation?

2) What is the slope of a horizontal line?

3) What is the slope of a vertical line?

4) What do you know about the slopes of: a) Parallel lines? b) Perpendicular lines?

5) Find the slope of the line containing the points (-3, 8) and (12, -4).

6) Find the slope and y-intercept of: $4x - 2y = {}^{-}9$

7) Write an equation in slope-intercept form with a slope of $\frac{1}{2}$ and a y-intercept of -6.

8) Write an equation in slope-intercept form for a line with a slope of -4 that contains the point (-2, 13).

9) Write the equation for the following problem, and then solve the equation.
Darci is 28 years younger than her mother, Georgia. The sum of their ages is 66. How old is each person now?

10) Solve this system of equations using any method.

$5x + 3y = {}^{-}4$

$2x - 6y = 20$

11) Multiply and simplify: $(x+4)(2x-3)$

12) Evaluate each expression.

a) 8^0 b) 8^1 c) $(-8)^2$ d) -8^2 e) $-(-8)^2$ f) 8^{-2} g) $(-8)^{-2}$

13) Factor completely.

a) $12x^2 - 36x$ b) $x^2 - 36$ c) $x^2 + 7x - 18$ d) $6x^2 + x - 12$

14) Simplify each radical.

a) $\sqrt{16}$ b) $\sqrt{12}$ c) $\sqrt{160}$ d) $-2\sqrt{50}$

15) Simplify each expression, leaving all positive exponents. Assume that no variable equals zero.

a) $x^6 x^4$ b) $\left(x^6\right)^4$ c) $\frac{x^6}{x^4}$ d) $\frac{x^4}{x^6}$ e) $\frac{x^{-4}}{x^6}$