Algebra Review #32 *SHOW HOW YOU SOLVED EACH PROBLEM*

NAME _____

1.
A plane starts its descent at 15,000 feet above the ground. If it descends 2,000 feet per minute, write an equation that models its distance, d, above ground after t minutes.

A $15000 - 2000 = d$
B $15000 - 2000d = t$
C $15000 - 2000t = d$
D $15000t - 2000 = d$

2.
Fill in the properties that justify each step:

$4x - (9 + x) = 5x + 3x$	Given
$4x - (9 + x) = 8x$	Combining Like Terms
$4x - 9 - x = 8x$	
$4x - x - 9 = 8x$	
$3x - 9 = 8x$	Combining Like Terms
$-9 = 5x$	
$\dfrac{-9}{5} = x$	
$x = \dfrac{-9}{5}$	

3. How many solutions does the following equation have?
$$-4(x - 9) = -2(2x - 18)$$

A Infinite
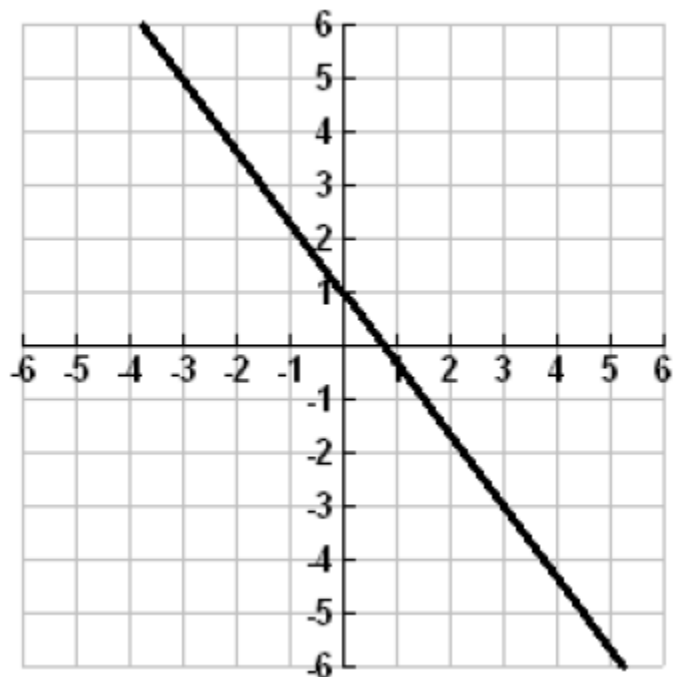B One
C None
D Two

4. What is the y-intercept in the following equation?

$$7y = -28 + 14x$$

Y-intercept _____

5. Find the equation of a line with a slope of 5 and which goes through the point (1,1).
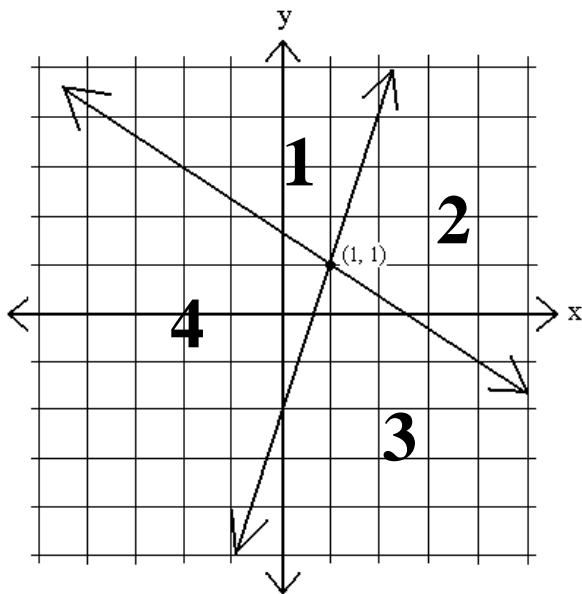
6. Write an equation for the graph shown below:

7. Which of the following are equivalent to

$$2\sqrt{15}$$

A $\sqrt{30}$

B $\sqrt{70}$

C $\sqrt{60}$

D $\sqrt{160}$

9. Simplify:

$$\left(\frac{4c^{-5}}{8d^0}\right)^3$$

10.

Solve for x: $\dfrac{(x+2)}{10} = \dfrac{3}{5}$

8. Which section should be the shaded solution for the following system of inequalities:

$$y \geq 3x - 2$$
$$y \geq -\frac{2}{3}x + \frac{5}{3}$$

A 4
B 1
C 3
D 2