Name_____ Period:_____ Date_____

REVIEW: Solving Equations – Math 8

DIRECTIONS: Answer each question be sure to SHOW ALL WORK (even for multiple choice!) You may use your notes. No Questions.

Part I: Multiple Choice (3 pts each)

1) What is the solution of the equation: $x + 4 + 3x = 72$

    a. 17

    b. 19

    c. 34

    d. 38

2) Solve for x: $15x - 3(3x + 4) = 6$

    a. 1

    b. $-\frac{1}{2}$

    c. 3

    d. $\frac{1}{3}$

3) Which value of p is the solution of: $5p - 1 = 2p + 20$

    a. $\frac{19}{7}$

    b. $\frac{19}{3}$

    c. 3

    d. 7

5) What is the solution for the equation: $6(x - 1) = 2x + 2 + 4x - 8$

    a. -1

    b. $\frac{1}{2}$

    c. Infinitely many solutions

    d. There is no solution

6) Determine the number of solutions that each equation has. Circle appropriate answer,

   a) $3(x + 1) = -5x + 3 + 8x$ One solution   No solutions   Infinitely many

   b) $13x - 8 = 8x + 1 + 4x$ One solution   No solutions   Infinitely many

   c) $3x + 5 = -2x + 5x$ One solution   No solutions   Infinitely many

7) Which choice is NOT a step you would take to solve: $-8x + 7 = -5$

   a. Multiply all terms by -8.

   b. Add -7 to both sides.

   c. Subtract 7 from both sides.

   d. Divide by -8.

8) Which of the following has **no** solution?

   5) $3x = 8$

   6) $4 + x = 4$

   7) $6(x - 5) = 3(2x + 10)$

   8) $4x - 3 + 2x = -9 + 6x + 6$

9) What is the solution to: $3.25x + x - 4.25x = -2$

10) Alyssa solved the linear equation $2x - 3 - 8x = 14 + 2x - 1$ as follows:

Line 1: $\quad -6x - 3 = 13 + 2x$

Line 2: $\quad -6x - 3 + 3 = 13 + 3 + 2x$

Line 3: $\quad -6x = 16 + 2x$

Line 4: $\quad -6x + 2x = 16$

Line 5: $\quad -4x = 16$

Line 6: $\quad \dfrac{-4x}{-4} = \dfrac{16}{-4}$

End: $\quad x = -4$

Solve the equation above and write answer here:_____

Determine in which line Alyssa made a mistake. Describe the mistake below using proper mathematical terms.
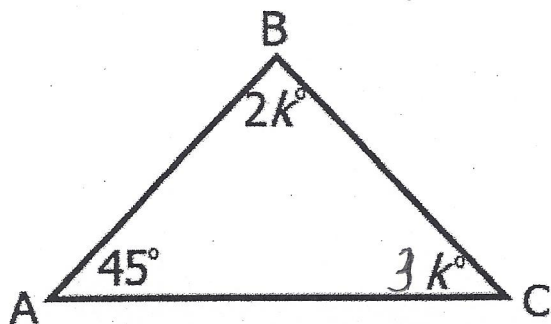
11) Find the value of the variable. $\qquad$ k = _____

Then find the measure of each angle. $\qquad$ ∡A = _____

∡B = _____

∡C = _____

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Solving Equations – Math 8

Solve each equation. There may be one solution, no solution or infinitely many solutions. You MUST should all work to receive full credit. CHECK **2**

12) $x - 9 = \frac{3}{5}x$

13) $3x + 15 = 4(x + 6)$

14) $\frac{1}{3}(15x - 12) - 9x = -6$

15) $7(2x + 5) = 4x - 9 - x$

Solve each equation. There may be one solution, no solution or infinitely many solutions. You MUST should all work to receive full credit.

16) $\frac{2}{5}p - 2 + 4p = \frac{-3}{5}p - 12$

17) $\frac{3x+2}{6} = \frac{5x+6}{6}$

18) $2(3 - 2x) + 14x = 10x + 9$