

Solve Equations and Inequalities

Blizzard Bag #3

1. From the set $\{1, 4, 6\}$, use substitution to determine which value of x makes the equation true.

$$15x + 9 = 69$$

- A. 1
 - B. 6
 - C. none of these
 - D. 4
-

2. From the set $\{6, 21, 23\}$, use substitution to determine which value of x makes the equation true.

$$75x = 1,500$$

- A. 23
 - B. none of these
 - C. 6
 - D. 21
-

3.

Directions: Select all the correct answers.

Kelley found 14 grub worms in her backyard. After a short rain, she found 56 grub worms in her backyard. Select the choices that would model how many more grub worms Kelley found in her backyard after the rain.

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$$56 - 14 = n$$

•

$$n - 14 = 56$$

•

14 + 40 = 54 and 54 + 2 = 56,
so 42 added to 14 equals 56

•

56	
n	14

•

n	
14	56

•

$14 + 50 = 64$ and $64 + 6 = 70$,
so 56 added to 14 equals 70

•

$14 + n = 56$

4. From the set $\{1, 2, 6\}$, use substitution to determine which value of x makes the equation true.

$$28 - 2x = 16$$

- A. 2
- B. none of these
- C. 1
- D. 6

5. From the set $\{119, 238, 476\}$, use substitution to determine which value of x makes the equation true.

$$x \div 7 = 68$$

- A. none of these
 - B. 119
 - C. 238
 - D. 476
-

6. From the set $\{8, 47, 94\}$, use substitution to determine which value of x makes the equation true.

$$376 \div x = 47$$

- A. none of these
- B. 47
- C. 94
- D. 8

7.

Directions: Select all the correct answers.

"Twenty-eight is more than four times another number" can be shown by the inequality $28 > 4n$. Select the values of n which could possibly make this a true statement.

4

6.65

$n > 7$

$8\frac{1}{3}$

•

7

8. From the set $\{21, 45, 90\}$, use substitution to determine which value of x makes the equation true.

$$1,890 \div x = 42$$

- A. 90
- B. none of these
- C. 45
- D. 21

9.

Directions: Select all the correct answers.

Solve each of the equations above and select the numbers that represent solutions to more than one of the six equations.

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$$x = 1$$

•

$$x = 2$$

•

$$x = 3$$

•

$$x = 4$$

•

$$x = 5$$

•

$$x = 6$$

10. From the set $\{234, 244, 399\}$, use substitution to determine which value of x makes the equation true.

$$43 + x = 440$$

- A. 234
 - B. none of these
 - C. 399
 - D. 244
-

11. From the set {17, 23, 39}, use substitution to determine which value of x makes the equation true.

$$5(x - 16) = 195$$

- A. 23
 - B. none of these
 - C. 17
 - D. 39
-

12.

Directions: Select the correct location on the number line.

A box of candy bars costs \$3.12. Each candy bar in the box costs \$0.52. How many candy bars are in the box?

13. From the set {6, 9, 81}, use substitution to determine which value of x makes the inequality true.

$$3x < 27$$

- A. 9
 - B. 81
 - C. 6
 - D. none of these
-

14.

Directions: Type the correct answer in each box. Use numerals instead of words. If necessary, use / for the fraction bar(s).

Trent wants to buy 2 packs of trading cards for 3 dollars each. The trading card packs that Trent normally buys tend to come in packs of 6, 10, 12, or 15 cards. After selecting 2 packs, Trent found that the first pack of cards cost 25 cents per card, and the second pack cost 30 cents per card. Trent uses this information to write the equations below in order to compare c , the number of cards in each pack.

There are cards in the first pack, and there are cards in the second pack.

The first pack has more cards than the second pack.

15. From the set $\{1, 9, 17\}$, use substitution to determine which value of x makes the equation true.

$$36x + 32 = 428$$

- A. 1
- B. none of these
- C. 9
- D. 17