

Do Now: Decide whether the given value is a solution of the equation. If not, find the solution.

1. $7x - 3x - 8 = -32$; $x = 6$

No $x = -6$

2. $2(-8a + 3a) = 17$; $a = -3$

$$\begin{array}{r} 2 - 5a = 17 \\ -2 \quad -2 \hline \end{array}$$

$$\begin{array}{r} -5a = 15 \\ -5 \quad -5 \hline \end{array}$$

$a = -3$

6.1 Solving Multi-Step Equations

7.NS
7.EE

- SWBAT solve equations that require using two or more steps.
- SWBAT represent and analyze situations using algebraic symbols.

Calculators: Yes

A pack of baseball cards costs \$3 and a pack of football cards costs \$4. Michael buys the same number of packs of each type and pays \$42. How many packs of each did he buy?

$$3(6) + 4(6)$$

$$3p + 4p = 42$$

$$\frac{7p}{7} = \frac{42}{7}$$

$$p = 6$$

6 packs of each

12 packs total

For a science fair, Moise performs an experiment to see how the number of Venus flytrap seeds planted in a cup affects plant growth. In each cup, he plants either 5 seeds or 10 seeds. He wants to use an equal number of cups for each seed amount. He has 75 seeds. How many cups does he need?

$$\begin{array}{c} 5 \\ \text{(total)} \end{array} 5c + 10c = 75$$

$$\begin{array}{r} 15c = 75 \\ 15 \quad 15 \hline \end{array}$$

$$c = 5$$

Moise needs 10 cups in total

Solve:

Same Side

$$3x + 12 - 4x = 20$$

$$3x - 4x = -1x$$

$$12 - x = 20$$

$$-x = 8$$

$$x = -8$$

Opposite Sides

$$-x + 12 = 20$$

$$-x = 8$$

$$x = -8$$

Solve:

Same Side

$$21 = 7f + 15 - 10f$$

$$7f - 10f = -3f$$

$$21 = -3f + 15$$

$$6 = -3f$$

$$\leftrightarrow -3f = 6$$

$$-2 = f$$

$$f = -2$$

Solve:

$$6n - 2(n + 1) = 26$$

$$6n - 2n - 2 = 26$$

$$6n - 2n = 4n$$

$$4n = 28$$

$$4n = 28$$

$$n = 7$$

Solve:

$$5(7 - x) - 3x = 43$$

$$35 - 5x - 3x = 43$$

$$35 - 5x - 3x = 43$$

$$-5x - 3x = -8x$$

$$-8x = 8$$

$$-8x = 8$$

$$-8x = 8$$

$$x = -1$$

Solve:
Dividing by 4

$$\frac{3x+10}{4} = 7$$

$$\cancel{4} \left(\frac{3x+10}{\cancel{4}} \right) = (7) \cdot \cancel{4}$$

$$3x+10 = 28$$

$$\begin{array}{r} 3x+10 = 28 \\ -10 \quad -10 \\ \hline 3x = 18 \end{array}$$

$$\frac{3x}{3} = \frac{18}{3} \quad (x=6)$$

Solve:

$$\cancel{5} \left(\frac{7x+5}{\cancel{5}} \right) = (15) \cancel{5}$$

$$7x+5 = 75$$

$$\begin{array}{r} 7x+5 = 75 \\ -5 \quad -5 \\ \hline 7x = 70 \end{array}$$

$$\frac{7x}{7} = \frac{70}{7} \quad (x=10)$$

Solve:

1. $8k - 4 - 3k - 17 + 7k = -21$

2. $2z - 4(9 - 3z) = 62$

3. $-34 = \frac{3d+8}{3}$

Exit Pass 6.1

Tickets to the NMS dance cost \$8 each. Seventy people bought their tickets in advance and the rest bought them at the door. The revenue from ticket sales is \$2560. How many people bought their tickets at the door?

"Don't blame the sea if you cannot catch a fish."

Working individually or with a partner, complete the workbook.

Workbook pg. 77 #1, 4, 5-13 odds, 14-19 all

Extra-Credit: #20, 21



Reflection of Today's Lesson

6.1 Solving Multi-Step Equations

7.NS
7.EE

- SWBAT solve equations that require using two or more steps.
- SWBAT represent and analyze situations using algebraic symbols.

Calculators: Yes

Homework

pg. 274 #12, 13, 15-24 all, 27-33 odd

