

Chapter 4-5 and 4-6 Solving Two-Step Equations

Objective: To write and evaluate expressions with two math operations and to solve two-step equations using number sense.

Writing and Evaluating

Define a variable and write an algebraic expression for the phrase "\$10 plus \$5 times the number of roses ordered."

Let "n" = the number of roses ordered < define the variable

$10 + 5 * n$ < write an algebraic expression.

$10 + 5n$ < rewrote $5*n$ as $5n$

Evaluate the expression for $n = 12$ roses

$10 + 5n$

$10 + 5(12)$ < evaluate the expression for 12 roses

$10 + 60$ < Multiply

70 < Simplify

If you order one dozen roses it will cost you \$70.

$$\begin{array}{r} 70 = 10 + 5n \\ -10 \quad -10 \\ \hline 60 \quad 0 \end{array}$$

$$\frac{60}{5} = \frac{5n}{5}$$

$$12 = n$$

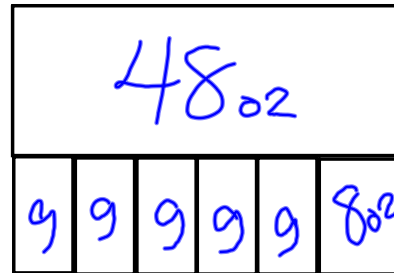
$$70 = 10 + 5(12)$$

1st Step - solve for the addition or subtraction.

- Rewrite

2nd Step - is to solve for either multiplication or division

Suppose your Grandmother sends you 5 games for your birthday. Each game has the same weight. The box she mails them in weighs 8 oz. The total weight of the shipping container is 48 oz. What is the weight of each game?



$$\begin{array}{r}
 48 \\
 \underline{-8} \\
 \hline
 40
 \end{array}
 = 5g + 8$$

$$\begin{array}{r}
 40 \\
 \underline{\quad 5} \\
 \hline
 5
 \end{array}
 = \frac{40}{5}g$$

Rewrite

$$8 = g$$

$$48 = 5(8) + 8 \quad \checkmark$$

Rewrite
the next
step!

$$3m + 9 = 21$$

$$m = 4$$

$$8d + 5 = 45$$

$$4y - 11 = 33$$

1) Addition
2) mult.

$$7w + 16 = 37$$

$$3y + 13.6 = 40.6$$

$$\frac{2}{3} \cdot 3 = 12$$

