

I. Definitions

variable:

The employee at the grocery store knew there were sixteen apples available for sale. 4 apples were on the shelf and a box of apples were stored in the back. How many apples must be in the box?

algebra:**algebraic expression:**

$$4 + a = 16$$

II. Inverse Operations

$$\begin{array}{r} 16 \\ - 4 \\ \hline \end{array} \qquad \begin{array}{r} 4 \\ + \quad \\ \hline 16 \end{array} \qquad \begin{array}{r} \quad \\ + 4 \\ \hline 16 \end{array}$$

Addition and _____ are inverse operations.

$$\begin{array}{r} 2 \\ \times \quad \\ \hline 10 \end{array} \qquad \begin{array}{r} 2 \\ \overline{) 10} \end{array} \qquad 2 \overline{) 10}$$

Multiplication and _____ are inverse operations.

III. Solve for the Variable in Addition Equations.

$$\begin{array}{r} 16 \\ + N \\ \hline 45 \end{array}$$

$$\begin{array}{r} N \\ + 12 \\ \hline 38 \end{array}$$

To solve for a missing
addend

$$\begin{array}{r} 3. \quad b \\ + 3 \\ \hline 26 \end{array}$$

$$\begin{array}{r} 4. \quad 16 \\ + n \\ \hline 16 \end{array}$$

$$\begin{array}{r} 5. \quad 401 \\ + p \\ \hline 465 \end{array}$$

$$\begin{array}{r} 6. \quad m \\ + 98 \\ \hline 120 \end{array}$$

IV. Solve for the Variable in Subtraction Equations.

$$\begin{array}{r} N \\ - 25 \\ \hline 54 \end{array}$$

To solve for a missing **minuend**

$$\begin{array}{r} 78 \\ - N \\ \hline 61 \end{array}$$

To solve for a missing **subtrahend**

7.
$$\begin{array}{r} p \\ - 18 \\ \hline 18 \end{array}$$

8.
$$\begin{array}{r} 20 \\ - w \\ \hline 5 \end{array}$$

9.
$$\begin{array}{r} 416 \\ - R \\ \hline 120 \end{array}$$

10.
$$\begin{array}{r} 165 \\ - 7 \\ \hline d \end{array}$$

V. Solve for the Variable in Multiplication Equations.

$$\begin{array}{r} 10 \\ \times N \\ \hline 40 \end{array}$$

$$\begin{array}{r} N \\ \times 11 \\ \hline 88 \end{array}$$

To solve for a missing **factor**

11.
$$\begin{array}{r} S \\ \times 6 \\ \hline 36 \end{array}$$

12.
$$\begin{array}{r} 25 \\ \times h \\ \hline 75 \end{array}$$

VI. Evaluate algebraic expressions

Evaluate each algebraic expression when $a = 1$, $b=2$, and $c=3$

$a + 5$	$a + b$
13. $c - b$	14. $(b)(c)$

To evaluate **algebraic expressions**

V. Practice

15	16
17	18
19	20
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