

Four steps to setting up and solving a word problem:

1. Define a variable & write an equation
2. Solve the equation
3. Answer the question in a complete sentence
4. Does your answer make sense? Why?

Ex. 1: Jamie bought two quarts of milk and three pints of yogurt for \$4.68. A pint of yogurt costs 1.5 times the price of a quart of milk. How much is a quart of milk?

m = price of milk

y = price of yogurt

$$2m + 3y = 4.68$$

$$y = 1.5m$$

A quart of milk
costs \$.72.

$$2m + 3(1.5m) = 4.68$$

A pint of yogurt
costs \$1.08.

$$2m + 4.5m = 4.68$$

$$\begin{array}{r} 4.5m \\ \hline 6.5 \end{array} = \frac{4.68}{6.5}$$

$$m = .72$$

Ex. 2: I spent \$46 shopping yesterday when I bought a t-shirt, a jacket, and a pair of jeans. The jacket cost twice as much as the t-shirt. The jeans cost 6 dollars more than the t-shirt. How much did each item cost?

$$t = \text{t-shirt } \$$$

$$j = \text{jacket } \$$$

$$p = \text{jeans } \$$$

$$t + j + p = 46$$

$$j = 2 \cdot t$$

$$p = t + 6$$

A shirt cost \$10.

A jacket cost \$20.

Jeans cost \$16.

$$t + 2t + t + 6 = 46$$

$$t + 2t + t + 6 = 46$$

$$4t + 6 = 46$$

$$\begin{array}{r} 4t + 6 = 46 \\ -6 \quad -6 \\ \hline 4t = 40 \\ \underline{4} \quad \underline{4} \end{array}$$

$$t = 10$$