Translating Sentences into Equations

a) Five subtract 3 times a number is equal to 3.5 times the same number, subtract 8.

$$5 - \frac{3}{1} = \frac{3.5}{1} - \frac{8}{1}$$

$$5 = 6.5 - \frac{8}{1}$$

$$\frac{13}{1} = \frac{6.5}{1}$$

$$\frac{13}{1} = \frac{6.5}{1}$$

$$\frac{13}{1} = \frac{6.5}{1}$$

b) Fifteen divided by a number is -3.

$$rac{15}{m} = -3(n)$$
 $rac{15}{-3} = -3n$
 $rac{15}{-3} = -3$

Word Problems

- Let your variable represent the unknown.
- Write an equation using this variable.
- Solve

A large pizza with tomato sauce and cheese costs \$7.50, plus \$1.50 for each additional topping. A customer orders a large pizza and is charged \$16.50. How many toppings did the customer order?

- a) Write an equation to solve the problem.
- b) Solve the problem. Verify the solution.

(cost of base pizza) + (cost of toppings) = Total
$$(7.50) + (1.50x) = 16.50$$
Solve receives if $\frac{1.50x}{1.50} = \frac{9.00}{1.50}$

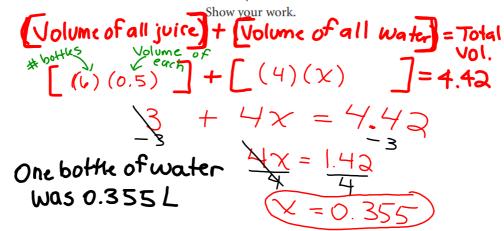
There toppings $\frac{1.50x}{1.50} = \frac{9.00}{1.50}$

Word Problems

- Let your variable represent the unknown.
- Write an equation using this variable.
- Solve

let x = volume of 1 bottle of water Assessment Focus Vianne took 4 bottles of water and 6 bottles of juice to a family picnic. Each bottle of juice contained 0.5 L. The total volume of water and juice was 4.42 L. What was the volume of 1 bottle of water?

- a) Choose a variable and write an equation for this situation.
- b) Solve the equation.
- c) Verify the solution.



Word Problems

- Let your variable represent the unknown.
- Write an equation using this variable.
- Solve

A cell phone company offers two plans.

Plan A: 120 free minutes, \$0.75 per additional minute Plan B: 30 free minutes, \$0.25 per additional minute

Which time for calls will result in the same cost for both plans?

a) Model the problem with an equation.

b) Solve the problem.

Cost
$$A = Cost B$$
 $0.75 (\# paid mins) = 0.25 (\# paid mins)$

distribute $0.75 (m-120) = 0.25 (m-30)$

on agriables $0.75 m - 90 = 0.25 m - 7.5$

on one side $-0.25 m$
 $0.5 m - 90 = -7.5$

in give $0.5 m = 82.5$

The cost will be the same when each plan uses

[0.5 minutes.]