

Name: _____

Date: 11/14/17

AIM: How can we solve word problems using equations?

Do Now: At the grocery store, you bought 4 boxes of cereal and \$2.89 worth of strawberries. The bill came to \$12.25. How much was each box of cereal? Write an equation and solve.

$$\begin{array}{r} 4x + 2.89 = 12.25 \\ - 2.89 \quad \quad 2.89 \\ \hline 4x \quad \quad = 9.36 \\ \hline x = 2.34 \end{array}$$

Let x = Cost of one box of cereal.

Check

$$\begin{array}{l} 4x + 2.89 = 12.25 \\ 4(2.34) + 2.89 \stackrel{?}{=} 12.25 \\ 9.36 + 2.89 \stackrel{?}{=} 12.25 \\ 12.25 = 12.25 \checkmark \end{array}$$

Word Problems

For each question, (1) write a let statement, (2) write an equation, (3) solve the equation, (4) write a sentence to answer the question, (5) check your equation, (6) make sure your answer makes sense.

1. Your math club is printing a booklet of math puzzles. The printer charges \$2.00 per booklet plus \$90.00 to create the film. How many booklets can you have printed for \$500?

$$\begin{array}{r} 2.00x + 90.00 = 500.00 \\ - 90.00 \quad \quad - 90.00 \\ \hline 2.00x \quad \quad = 410.00 \\ \hline x = 205 \end{array}$$

Let x = Number of booklets

You can have 205 booklets printed

2. Your club finds another printer who charges \$1.50 per booklet, plus \$140 for film. Which is the better printer to use? Explain.

$$\begin{array}{r} 1.50x + 140.00 = 500.00 \\ - 140.00 \quad \quad - 140.00 \\ \hline 1.50x \quad \quad = 360.00 \\ \hline x = 240 \end{array}$$

Let x = Number of booklets

You can have 240 booklets printed
So this is the better deal.

3. A bowling alley charges \$0.75 to rent shoes and \$2.25 per game. How many games can you play if you have \$15.00?

$$\begin{array}{r} 0.75 + 2.25x = 15.00 \\ - 0.75 \quad \quad - 0.75 \\ \hline 2.25x \quad \quad = 14.25 \\ \hline x = 6 \end{array}$$

Let x = Number of games

You can play 6 games

4. Yellow Cab Taxi Company has a flat rate charge of \$5.00 for every pick up and \$0.75 for every mile. How many miles did a person go if their ride cost \$14.00?

$$\begin{array}{r} 5.00 + 0.75x = 14.00 \\ - 5.00 \quad \quad - 5.00 \\ \hline 0.75x \quad \quad = 9.00 \\ \hline x = 12 \end{array}$$

Let x = Number of miles

The person rode 12 miles