

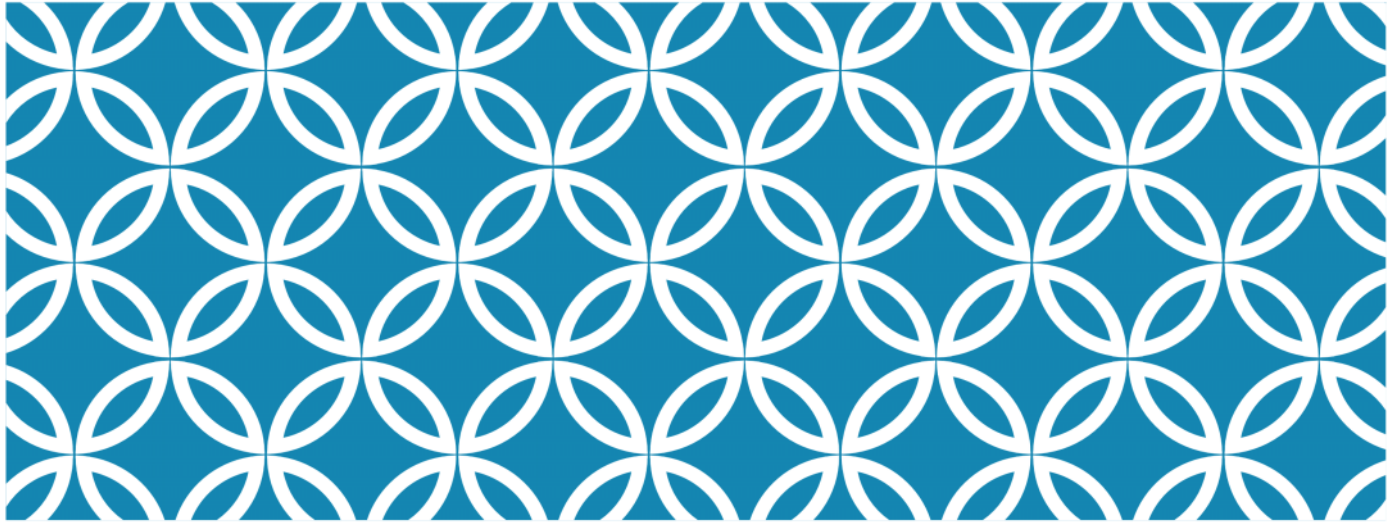
DAILY QUEST

Subtract the polynomials.

1) $(7x^2 - 6 - 8x) - (4x - 10 + 6x^2)$

Multiply.

2) $(x - 3)(2x + 5)$



LESSON 4.1

SOLVE EQUATION WORD PROBLEMS

Goal: To solve equations/inequalities in math and real world context and to write rules for arithmetic sequence.

Obj: SWBAT write/solve equations in word problems.

PROBLEM 1:

Jill is baking cookies for a bake sale. She needs a total of 126 cookies for the bake sale. She has already baked 4 dozen cookies. How many more cookies does she need to bake to meet her goal? Write and solve an equation for this situation.

unknown cookies	+	already bake cookies	=	Total cookies
C	+	48 -48	=	126 <u>-48</u>

$$C = 78$$

78 cookies

PROBLEM 2:

Jim has \$50 to spend at the fair. If it costs \$5 for admission and \$2.50 per ride, how many rides can Jim ride at the fair? Write and solve an equation for this situation.

admission + rides Total

$$\begin{array}{r} \$ \\ - \$ \end{array} + 2.50r = \begin{array}{r} \$ \\ 50 \\ - 5 \\ \hline \end{array}$$

$$\frac{2.50r}{2.50} = \frac{45}{2.50}$$

$$r = 18$$

0.06%

PROBLEM 3:

Leon paid \$26.50 for a shirt with a sales tax of 6% included, but he doesn't remember the price without tax. What was the price of the shirt?

Write an equation to model the situation.

Then solve the equation.

$$\begin{array}{l} \text{original} \\ \text{cost} \end{array} + \text{Tax} \qquad \begin{array}{l} \text{cost of shirt} \\ \text{plus} \\ \text{tax} \end{array} \\ 1x + .06x = 26.50$$

$$\frac{1.06x}{1.06} = \frac{26.50}{1.06}$$

$$x = 25$$

$$\begin{array}{l} \text{original} \\ \text{cost} \end{array} + \text{Tax} \\ 25 + .06(25) = \\ 25 + 1.50 = 26.50$$

PROBLEM 4:

20%

Maria bought a blouse on sale for 20% off. The sale price was \$28.76. What was the original price?

Write an equation to model the situation.

Then solve the equation.

$$\begin{array}{r} \text{original} \\ \text{cost} \\ \text{blouse} \\ | \\ b \end{array} - \begin{array}{r} \text{discount} \\ \\ .2b \end{array} = \begin{array}{r} \text{Sale Price} \\ \\ 28.76 \end{array}$$

$$\frac{.8b}{.8} = \frac{28.76}{.8}$$

$$b = 35.95$$

0, 0.1, 0.2, 0.3, 0.4, 0.5, 0.6, 0.7, (0.8), 0.9, 1

PROBLEM 5:

James and Marie work at Publix. James worked 4 hours less than Marie. Together they worked 56 hours this week. How many hours did both of them work individually?

$$\begin{array}{rcl} \text{James} & + & \text{Marie} = \text{hrs} \\ M - 4 & + & M = 56 \end{array}$$

$$\begin{array}{rcl} 2M & - 4 & = 56 \\ + 4 & & + 4 \\ \hline & & \end{array}$$

$$\begin{array}{rcl} \frac{2M}{2} & = & \frac{60}{2} \\ & & \\ & & M = 30 \end{array}$$

$$\begin{array}{l} \text{Marie} = 30 \text{ hrs} \\ \text{James} = 26 \text{ hrs} \end{array}$$

PROBLEM 6:

James, Carlos and Marie work at the Olive Garden. Carlos worked two hours less than James, Marie worked four hours more than James. Together they worked 47 hours this week. How many hours did Carlos work?

$$\begin{array}{r} \text{James} \\ \underline{J} \end{array} + \begin{array}{r} \text{Carlos} \\ \underline{J-2} \end{array} + \begin{array}{r} \text{Marie} \\ \underline{J+4} \end{array} = \text{hrs} \\ \underline{\hspace{1cm}} \quad \underline{\hspace{1cm}} \quad \underline{\hspace{1cm}} \quad \underline{\hspace{1cm}} = 47$$

Carlos = 13 hrs

$$\begin{array}{r} 3J + 2 = 47 \\ \underline{-2} \quad \underline{-2} \\ 3J = 45 \\ \underline{3} \quad \underline{3} \\ J = 15 \end{array}$$

PROBLEM 7:

James, Carlos and Marie work at the Olive Garden. James worked 5 hours less than Marie, Carlos worked 8 hours more than Marie. Together they worked 63 hours this week. How many hours did all of them work individually?

PROBLEM 8:

Each of Miss Smith's students uses a certain number of pencils per week of school. There are 22 students in Miss Smith's class. If there are 36 weeks of school and Miss Smith's students use 3168 pencils in a school year, how many pencils does each student use per week? Write and solve an equation for this situation.