

Aim: How do we use proportional relationships to problems? **Date:** _____

Do Now

1.) You pay \$184 for 2 concert tickets, and your friend pays \$266 for 3 tickets to the same concert. Who got the better buy?

2.) You get 75 points for answering 15 questions correctly, and your friend got 70 points for answering 14 questions correctly. Who received the most point per question?

3) You swim your first lap in 2.4 minutes. You complete 16 laps in 12 minutes. Is the number of laps proportional to your time?

4) Do $\frac{6}{4}$ and $\frac{8}{12}$ form a proportion?

5) Is the table proportional?

x	$\frac{1}{2}$	1	$\frac{3}{2}$	2
y	3	6	9	12

_____ and _____ determine if proportional relationships exist.

If unit rates are _____, there is a proportional relationship. If cross-product are _____, there is a proportional relationship.

Using Proportions to Find Missing Quantities

1. Derek scored a total of 42 points in the first 4 basketball games. If he continues to score at this rate, how many points will he score during the entire 18 game season?

To Solve a Word Problem Using Proportions

- 1.
- 2.
- 3.
- 4.

2. In order to make 4 servings, a recipe calls for 3 cups of flour. How many cups of flour are needed for 38 servings?

3. Daniel can read 8 pages of his book in 5 minutes. At this rate, how long will it take him to read an entire 264 page book?

4. A photograph is 3.5 inches wide and 5 inches long. A newspaper editor enlarges the photograph for the newspaper. It is now 7 inches in length, how wide is the enlarged photograph?

5. A broken pipe was leaking 2 gallons of water every 5 minutes. How many gallons of water were wasted if it took 23 minutes to stop the leak?

6. It takes Zach 15 minutes to walk $7\frac{1}{2}$ blocks to the swimming pool. At this rate, how many blocks can he walk in one minute?

7. A 14-ounce energy drink contains $10\frac{1}{2}$ teaspoons of sugar. How much sugar is in one ounce of the drink?

8. Sally has a recipe that needs $\frac{3}{4}$ teaspoon of butter for every 2 cups of milk. If Sally increases the amount of milk to 3 cups of milk, how many teaspoons of butter are needed?