3-7: Learning Goals

- Let's revisit equivalent ratios.

3-7-1: Comparing Speeds

Which one doesn't belong? Be prepared to explain your reasoning.

A. 5 miles in 15 minutes

C. 20 miles per hour

B. 3 minutes per mile

D. 32 kilometers per hour

3-7-2: Price of Burritos

1. Two burritos cost $14.00. Complete the table to show the cost for 4, 5, and 10 burritos at that rate. Next, find the cost for a single burrito in each case.

number of burritos	cost in dollars	unit price (dollars per burrito)
2	14.00	
4		
5		
10		
b		

2. What do you notice about the values in this table?

3. Noah bought b burritos and paid c dollars. Lin bought twice as many burritos as Noah and paid twice the cost he did. How much did Lin pay per burrito?

	number of burritos	cost in dollars	unit price (dollars per burrito)
Noah	b	c	$\frac{c}{b}$
Lin	$2 \cdot b$	$2 \cdot c$	

4. Explain why, if you can buy b burritos for c dollars, or buy $2 \cdot b$ burritos for $2 \cdot c$ dollars, the cost per item is the same in either case.
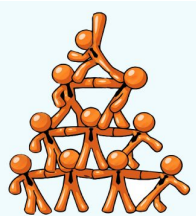
3-7-3: Making Bracelets

1. Complete the table. Then, explain the strategy you used to do so.

time in hours	number of bracelets	speed (bracelets per hour)
2		6
5		6
7		6
	66	6
	100	6

Leather Lanyard Bracelet
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2. Here is a partially filled table from an earlier activity. Use the same strategy you used for the bracelet problem to complete this table.

number of burritos	cost in dollars	unit price (dollars per burrito)
	14.00	7.00
	28.00	7.00
5		7.00
10		7.00

3. Next, compare your results with those in the first table in the previous activity. Do they match? Explain why or why not.

3-7-4: How Much Applesauce?

It takes 4 pounds of apples to make 6 cups of applesauce.

1. At this rate, how much applesauce can you make with:

   a. 7 pounds of apples?

   b. 10 pounds of apples?

2. How many pounds of apples would you need to make:
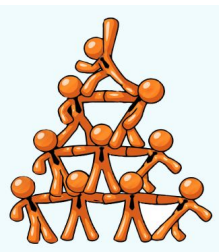
   a. 9 cups of applesauce?

   b. 20 cups of applesauce?

pounds of apples	cups of applesauce
4	6
7	
10	
	9
	20

3-7: Lesson Synthesis

- Equivalent ratios have the same unit rate.

- Unit rates are the factors that takes you from one column to the other column in a table of equivalent ratios.

pounds of apples	cups of applesauce
4	6
7	10.5
10	15
6	9
$13\frac{1}{3}$	20

3-7: Learning Targets

- I can give an example of two equivalent ratios and show that they have the same unit rates.

- I can multiply or divide by the unit rate to calculate missing values in a table of equivalent ratios.

3-7-5: Cheetah Speed

A cheetah can run at its top speed for about 25 seconds. Complete the table to represent a cheetah running at a constant speed. Explain or show your reasoning.

time (seconds)	distance (meters)	speed (meters per second)
4	120	
25		
	270	