Name _____

Date _____ Pd_____
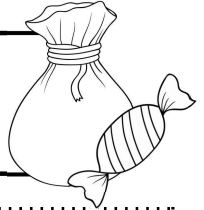
FRACTIONAL UNIT RATES

At Sugar Shack, customers fill bags with assorted candy. The price of a bag of candy is determined by the number of pounds purchased. The price of Lillian's bag of candy is shown at the right. Describe a method to determine the price per pound of candy.

$\frac{1}{4}$ LBS FOR $2.10

UNIT RATE	• The unit rate describes the _____, or the rate when the _____ is one.
	Ex: $0.27 per ounce, 40 miles per gallon

For 1-2, choose a method described above to answer each question.

1. Marcus walks $\frac{1}{3}$ of a mile in $\frac{1}{6}$ of an hour. If Marcus walks at a constant speed, how long will it take him to walk 1 mile? _____	2. At the grocery store, $\frac{2}{5}$ of a pound of grapes cost $2.00. What is the price per pound of grapes? _____

Use your understanding of unit rate answer the questions below.

3. Robert is going on a 2-day canoeing trip with his outdoor adventure group. Robert paddles at a constant speed and travels $\frac{3}{4}$ of a mile in 15 minutes.
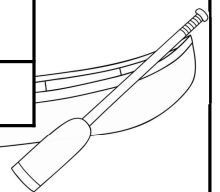
a. Create a table to determine how long it takes Robert to canoe 1 mile.

MINUTES	MILES

b. On the first day of the trip, Robert canoes for 3 hours. How far did Robert travel?
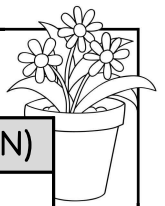
c. On the second day of the trip, Robert travels 6 miles down the river. How many hours did he spend paddling?

d. Another member of the group, Matthew, can canoe $\frac{3}{2}$ miles in 45 minutes. Who is traveling at a faster rate, Robert or Matthew? Explain your reasoning.
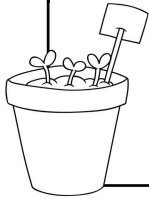
4. Ignacia grows daisies and sells them to local florists. The daisies grow at a constant rate as shown below. Use the information to answer a-c.

WEEKS	HEIGHT (IN)
$2\frac{1}{2}$	4

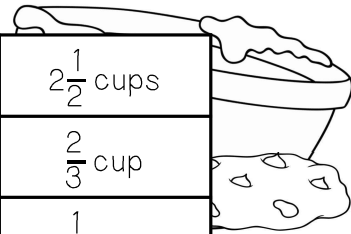a. Determine how many inches the daisies grow in one week.

b. Ignacia sells the flowers once they are 8 inches tall. After how many weeks can Ignacia sell the flowers?

c. How tall will the daises be after 10 weeks?

Crystal is making her family's famous homemade chocolate chip cookies. The list of the ingredients is shown in the table at the right. While she was cooking, part of the recipe got covered up and instead of adding $\frac{1}{6}$ cup of butter, she added 1 cup of butter. Use the information below to answer 5-9.

FLOUR	$2\frac{1}{2}$ cups
SUGAR	$\frac{2}{3}$ cup
BUTTER	$\frac{1}{6}$ cup
CHOCOLATE CHIPS	$1\frac{1}{6}$ cups

5. Write the ratio of butter to sugar in the original recipe.

6. How can you write an equivalent ratio of butter to sugar for 1 cup of butter?

7. How many cups of sugar should Crystal use now to keep the ratios of the recipe equivalent?

8. List the amount of each ingredient for Crystal's new recipe with 1 cup of butter.

Flour: _____

Chocolate chips: _____

9. The next day, Crystal decides to make the recipe again, but this time uses 1 cup of sugar. Crystal thinks she can multiply the amount of each ingredient by 3 to determine the new recipe with equivalent ratios. Do you agree or disagree? Explain.

Summarize today's lesson:

Name _____

Date _____ Pd_____

FRACTIONAL UNIT RATES

For 1-2, find the unit rate of each situation.

1. If $\frac{3}{4}$ of a gallon of paint covers $\frac{1}{3}$ of the wall, then how much paint is needed to cover the entire wall? _____	2. At the fabric store, Marisela spends $6.00 on $\frac{3}{5}$ yards of fabric. How much does one yard of fabric cost? _____

Use your understanding of unit rates to answer each of the following questions.

3. Students at Polk Middle School are given a fitness test. The results of their tests are shown in the table. Use the table to answer questions a-c.

a. Find the time it takes each student to run 1 mile.

Evian: _____

Toby: _____

Jillian: _____

FITNESS TEST RESULT	
Evian	$1\frac{1}{2}$ miles in 15 minutes
Toby	$\frac{2}{3}$ miles in 6 minutes
Jillian	$\frac{3}{4}$ miles in 9 minutes

b. Which student is running at the fastest rate? Explain.

c. Jillian is trying out for the cross country team. To make the team, she must run $3\frac{1}{2}$ miles in less than 40 minutes. Will Jillian make the team? Explain.

4. Stan makes his own trail mix for hiking adventures. The recipe is shown at the right. He realizes he has exactly 1 cup of raisins in his pantry and wants to use the entire cup in this batch. List the amount of each ingredient Stan should use to keep the ratios of the recipe equivalent.

Trail Mix Recipe:
$\frac{1}{4}$ cup of raisin

$\frac{5}{8}$ cup of chocolate chips

$1\frac{1}{2}$ cups almonds

Chocolate chips: _____

Almonds: _____