Today's Materials

- **calculator**
- **pencil**
- **notebook**
- **glue**
- **highlighter**

Introducing Proportional Relationships with Tables

Lesson 2

CCSS Standards: Building on	• 6.RP.A.3
CCSS Standards: Addressing	• 7.RP.A.2 • 7.RP.A.2.a • 7.RP.A.2.b

Let's solve problems involving proportional relationships using <u>tables</u>!

Today's Goals

❏ I understand these terms:
- ● proportional relationship
- ● constant of proportionality

❏ I can use a <u>table</u> to reason about two quantities that are in a proportional relationship.

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Notice and Wonder:
Paper Towels by the Case

Warm Up

- Notice and Wonder

Here is a table that shows how many rolls of paper towels a store receives when they order different numbers of cases.

What do you notice?

What do you wonder?

number of cases they order	number of rolls of paper towels
1	12
3	36
5	60
10	120

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Feeding a Crowd

Activity 2.2

- 5 Practices

Have you ever cooked rice?

What are the steps in cooking rice?

Have you ever eaten a spring roll? What are they?

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Begin this activity with Quiet Work Time. (5 min.)

Share your ideas as a team.

1. A recipe says that 2 cups of dry rice will serve 6 people.

   a. How many people will 10 cups of rice serve?
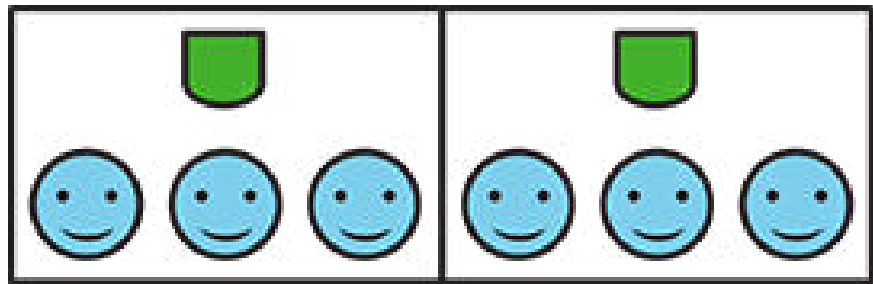
   b. How many cups of rice are needed to serve 45 people?

cups of rice	# of people
2	6
3	9
10	
	45

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2. A recipe says that 6 spring rolls will serve 3 people.

# of rolls	# of people
6	3
30	
40	
	28

What is a **proportional relationship**?

when two quantities are always in equivalent ratios

So the relationship between the number of cups of rice and the number of people is a **proportional relationship**.
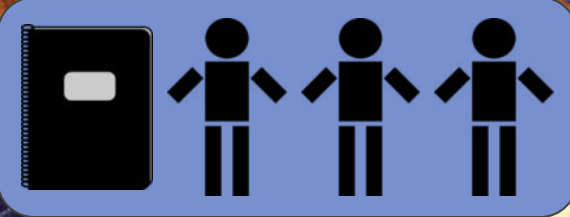
The number of cups of rice is **proportional** to the number of people.

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Making Bread Dough

Activity 2.3
- 5 Practices

A bakery uses 8 tablespoons of honey for every 10 cups of flour to make bread dough.

Begin this activity with Quiet Work Time. (3 min.)

Share your ideas as a team.

1. How many cups of flour do they use with 20 tbsp of honey?
2. How many cups of flour do they use with 13 tbsp of honey?
3. How many tablespoons of honey do they use with 20 cups of flour?

honey (tbsp)	flour (c)
8	10
20	
13	
	20

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What is a **constant of proportionality**?

a constant ratio (unit rate) in any proportional relationship

It can always be found by finding how much of the second quantity per one of the first quantity.

In the Bread Dough activity, the **constant of proportionality** was 1.25.

We could multiply any amount of honey by 1.25 to find the amount of flour needed.

Quarters and Dimes

(optional)

Activity 2.4

1. How many dimes equal the value of 6 quarters?

2. How many dimes equal the value of 14 quarters?

3. What value belongs next to the 1 in the table? **What does it mean in this context?**

# quarters	# dimes
1	
4	10
6	
14	

"Are you ready for more?"

Pennies made before 1982 are 95% copper and weigh about 3.11 grams each.

Pennies made after 1982 are primarily made of zinc.

Some people claim that the value of the copper in one of the old pennies is greater than the face value of the penny.

Find out how much copper is worth right now, and decide if this claim is true.

Today's Goals

❏ I understand these terms:
- proportional relationship
- constant of proportionality

❏ I can use a <u>table</u> to reason about two quantities that are in a proportional relationship.

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Green Paint

Cool Down