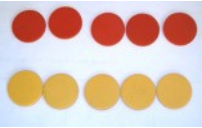



Day 8: Fractions with Two-Color Counters (adopted from *Teaching Mathematics* by Marilyn Burns)

Lesson Target:

- Solve single and multi step word problems and verify the solution
- Represent the fractions with using words pictures, and physical objects.

Process	Activities/Expected Students' responses	Teacher's Support
Understand the Goal	How many items are in the fractions?	
Explore/ Investigate/Solve 	<p>Introduce/Model <i>Fractions with Two-Color Counters</i></p> <ol style="list-style-type: none"> 1. Divide the 12 counters in to three equal groups with <u>all yellow</u> sides up. What fractional part of the whole set is represented by each group? Record how many counters are in $\frac{1}{3}$. 2. Flip the counter in one group. What fractional part of the whole set is red? Yellow? 3. Continue this process with the counters into <u>six, four, three, and two</u> equal groups with all yellow sides up. 4. Record each result <p>Explore <i>Fractions with Two-Color Counters</i></p> <p>T: How many equal groups are there in $\frac{1}{3}$s? S: It sounds like a division. S: I wonder if I can make multiplication equations, too.</p> <p>Share/ Discuss the result in class</p>	<p>Provide 12 color-counters each student or 12 coins. (Something that has different surface.)</p>  <p>Facilitate/Support a conversation</p> <p>Record in the class chart</p>
Conclude	<p>Journal Entry: How many apples are $\frac{1}{3}$ of 9 apples? Can you connect to division and/or multiplication equation?</p> <p>How many apples are $\frac{2}{3}$ of 9 apples?</p>	

Assessment:

- **Play** *Fractions with Two-Color Counters* accurately
- **Record** the results accurately.
- **Represent** the correct answer of journal entry with reasonable explanation with numbers, pictures, or words.

Fractions with Tow-Color Counters

Name _____ Date _____

I have _____ Color Counters!

# of Equal Groups	How many red counters?	What fractional part of the whole set is red?	How many yellow counters?	What Fractional part of the whole set is yellow?
3				
<p>1. $1/3$ of 12 counters are _____.</p> <p>2. 4 counters are _____ of 12 counters.</p> <p>3. It seems like a division. $12 \div 3 = 4$</p>				
6				
<p>1. $1/6$ of 12 counters are _____.</p> <p>2. 2 counters are _____ of 12 counters.</p> <p>3. It seems like a division. $12 \div =$</p>				
4				
<p>1. $1/4$ of 12 counters are _____.</p> <p>2. 3 counters are _____ of 12 counters.</p> <p>3. It seems like a division. $12 \div =$</p>				
2				
<p>1. $1/2$ of 12 counters are _____.</p> <p>2. 6 counters are _____ of 12 counters.</p> <p>3. It seems like a division. $12 \div =$</p>				

Extension: Practice Worksheets to deepen their knowledge

Solve these number stories. To help, you can use pennies or other counters, or you can draw pictures.

1. Mark has 4 shirts to wear. 3 of them have short sleeves. What fraction of the shirts have short sleeves? _____
2. 8 birds are sitting on a tree branch. 6 of the birds are sparrows. What fraction of the birds are sparrows? _____
3. June has 15 fish in her fish tank. $\frac{1}{3}$ of the fish are guppies. How many guppies does she have? _____
4. Mr. Sharp has 7 neckties. $\frac{3}{7}$ of the neckties are blue. How many neckties are blue? _____
5. Sam ate $\frac{2}{5}$ of a candy bar. How much of the candy bar did he eat? _____
6. If you were thirsty, would you rather have $\frac{2}{2}$ of a carton of milk or $\frac{4}{4}$ of that same carton? Explain.

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4. Mr. Sharp has 7 neckties. $\frac{3}{7}$ of the neckties are blue. How many neckties are blue? _____
5. Sam ate $\frac{0}{5}$ of a candy bar. How much of the candy bar did he eat? _____
6. If you were thirsty, would you rather have $\frac{2}{2}$ of a carton of milk or $\frac{4}{4}$ of that same carton? Explain.
