Activity I: Using Manipulatives

Team members’ names: __Peggy Greiner, Robin Hobson, Pat Penchalk

Goal: In this activity you will learn how to use manipulatives to compare and order fractions.

Let us start with an example.

Example: Mrs. Greiner gives you a chocolate candy bar. She says that you may have either 2/4, 3/5, or 3/8 of it. Which fractional part of the candy bar would give you the largest piece? The smallest piece?

Solution: Make an educated guess and then use trial and error to check.

First, you make a guess. ________________________

Once you make your guess, use fraction pieces to build each part that would represent a fractional part of the candy bar.

Next, compare the fraction parts.

Finally, put the fractions in order to show the largest to the smallest piece of the candy bar.

Examine these results. Was your guess accurate? Explain. ________________________________

______________________________________________________________________________

Additional practice:

1. Mrs. Hobson is making a dinner salad. She adds 7/8 cup lettuce, ¼ cup carrots, and ½ cup tomatoes. What is the order of ingredients Mrs. Hobson uses for the salad from least to greatest?

2. A spinner has 10 equal sections. 1/5 of the spinner is green, 1/10 is yellow, ½ is blue, and 1/5 is red. How many sections make up each color?

3. Mrs. Penchalk used a recipe calling for ¾ cup raisins, 2/3 cup water, ½ cup honey, and 1/3 cup flour. List the ingredients in order from the greatest amount to the least amount.
Comparing and Ordering Fractions

Activity II: Using LCD (Least Common Denominator)

Team members’ names: Peggy Greiner, Robin Hobson, Pat Penchalk

Goal: In this activity you will learn how to use the LCD to compare and order fractions.

Let’s start with a warm-up activity.

You will need 2 numbered cubes, 7 to 12. Let one student from your team roll the cubes. Call out both numbers that are rolled. (ex: 7 and 8)

Then, have the rest of your team members find the LCM (least common multiple) as quickly as possible. (ex: 7, 14, 21, 28, 35, 42, 49, 56, 63 and 8, 16, 24, 32, 40, 48, 56, 64)

Try this activity for 10 minutes. Compare your solutions with other teams.

How did you find the LCM of your number pairs? Finding the LCM allowed you to come up with an LCD (lowest common denominator).

Make the connection.
What did you do to the original denominators? What will you do to the numerators?

Now, use what you know about finding the LCD to respond to these questions.

1. Mrs. Penchalk’s class asked 40 students in their school to name their favorite vegetable. Use the information in the table to tell which vegetable is the most popular. Tell which vegetable is the least favorite.

<table>
<thead>
<tr>
<th>Favorite Vegetables</th>
<th>Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Broccoli</td>
<td>1/10</td>
</tr>
<tr>
<td>Peas</td>
<td>1/8</td>
</tr>
<tr>
<td>Corn</td>
<td>3/8</td>
</tr>
<tr>
<td>Green Beans</td>
<td>2/5</td>
</tr>
<tr>
<td>Spinach</td>
<td>1/4</td>
</tr>
</tbody>
</table>

2. Mrs. Greiner has red, green, and blue balloons. She has a total of 12 balloons. If 1/3 of her balloons are red and 1/4 are green, how many blue balloons does she have?

3. Kathleen paid $2.25 for 1/3 pound of yogurt-covered pretzels and $2.00 for 1/4 pound of chocolate covered pretzels. Which kind of pretzels cost more per pound?

Summarize your findings (be sure to explain how you compared and ordered your fractions).
Comparing and Ordering Fractions

Solutions

Activity I

**Team members’ names:**
Robin Hobson, Peggy Greiner, Pat Penchalk

1. Least to greatest: Carrots (¼ cup), Tomatoes (1/2 cup), Lettuce (7/8 cup)

2. Color sections: 2 sections are green (1/5), 1 section is yellow (1/10), 5 sections are blue (½), and 2 sections are red (1/5).

3. Least to greatest: 1/3 cup flour, ½ cup honey, 2/3 cup water, and ¾ cup raisins

Activity II

1. 10, 20, 30, 40, 50 (1/10)  
   8, 16, 24, 32, 40 (1/8)  
   8, 16, 24, 32, 40 (3/8)  
   5, 10, 15, 20, 25, 30, 35, 40 (2/5)  
   4, 8, 12, 16, 20, 24, 28, 32, 40 (1/4)  

   10X4=40 and 1X4= 4  
   8X5=40 and 1X5=5  
   8X5=40 and 3X8=24  
   5X8=40 and 2X8=16  
   4X10=40 and 1X10=10

   4/40 broccoli  
   5/40 peas  
   24/40 corn  
   16/40 green beans  
   10/40 spinach

The MOST POPULAR vegetable is corn and the LEAST POPULAR vegetable is peas.

2. 1/3 =4/12, so 4 balloons are red; ¼ = 3/12, so 3 balloons are green. 4/12 + 3/12 = 7/12, so there are 5 left over spaces, or 5/12. Therefore, 5 balloons are blue.

3. The yogurt covered pretzels cost $6.75 per pound ($2.25 X3) and the chocolate covered pretzels cost $8.00 per pound ($2.00 X4). Therefore, the chocolate covered pretzels cost more per pound.