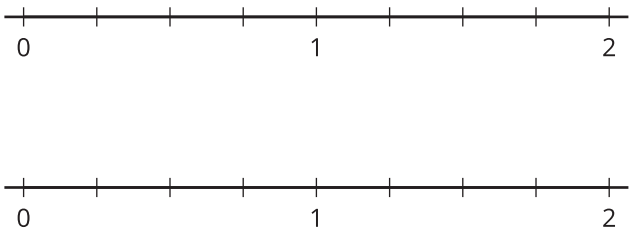
Section B: Practice Problems

1. a. Write $\frac{4}{3}$ in as many ways as you can as a sum of fractions.

   b. Write $\frac{9}{8}$ in at least 3 different ways as a sum of fractions.

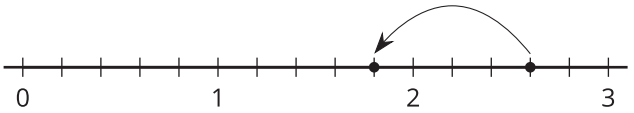
(From Unit 3, Lesson 7.)

2. a. Draw "jumps" on the number lines to show two ways to use fourths to make a sum of $\frac{7}{4}$.



   b. Represent each combination of jumps as an equation.

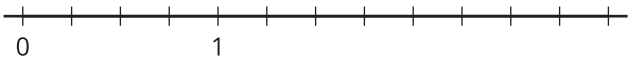
(From Unit 3, Lesson 8.)



3. a. Explain how the diagram represents $\frac{13}{5} - \frac{4}{5}$.

Use the diagram to find the value of $\frac{13}{5} - \frac{4}{5}$.

b. Use a number line to represent and find the difference $\frac{9}{4} - \frac{3}{4}$.



(From Unit 3, Lesson 9.)

4. Show two different ways to find the difference: $2 - \frac{3}{4}$

(From Unit 3, Lesson 10.)

5. Elena is making friendship necklaces and wants the chain and clasp to be a total of $18\frac{1}{4}$ inches long. She is going to use a clasp that is $2\frac{3}{4}$ inches long. How long does her chain need to be? Explain or show your reasoning.

(From Unit 3, Lesson 11.)

6. For each of the expressions, explain whether you think it would be helpful to decompose one or more numbers to find the value of the expression.

   a. $\frac{4}{3} + \frac{5}{3}$

   b. $5\frac{1}{5} - 2\frac{2}{5}$

   c. $9\frac{5}{6} - 6\frac{1}{6}$

(From Unit 3, Lesson 12.)

7. The lengths of the shoes of a dad and his two daughters are shown.

$8\frac{5}{8}$ inches $3\frac{6}{8}$ inches $12\frac{1}{8}$ inches

For each question, show your reasoning.

a. How much longer is the older daughter's shoes than her sister's?

b. Which is longer, the dad's shoes or the combined lengths of his daughters' shoes?

(From Unit 3, Lesson 12.)

8. **Exploration**

A chocolate chip cookie recipe calls for $2\frac{3}{4}$ cups of flour. You only have a $\frac{1}{4}$-cup measuring cup and a $\frac{3}{4}$-cup measuring cup that you can use.

a. What are different combinations of the measuring cups that you can use to get a total of $2\frac{3}{4}$ cups of flour?

b. Write each of the combinations as an addition equation.

9. **Exploration**

The table shows some lengths of different shoe sizes in inches.

U.S. shoe size	insole length
1	$7\frac{6}{8}$
1.5	8
2	$8\frac{1}{8}$
2.5	$8\frac{2}{8}$
3	$8\frac{4}{8}$
3.5	$8\frac{5}{8}$
4	$8\frac{6}{8}$
4.5	9
5	$9\frac{1}{8}$
5.5	$9\frac{2}{8}$
6	$9\frac{4}{8}$
6.5	$9\frac{5}{8}$
7	$9\frac{6}{8}$

a. What do you notice about the insole lengths as the size increases?

b. What will the insole length increase be from size 7 to 7.5? What is the insole length of a size 7.5 shoe?

c. Predict the insole length for sizes 9, 10, and 12. Explain your prediction. Then solve to find out if your prediction is true.