Unit 3, Lesson 8

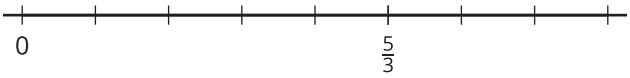
Addition of Fractions

Let's explore sums of fractions on a number line.

Warm-up

Notice and Wonder: A Fraction on a Number Line

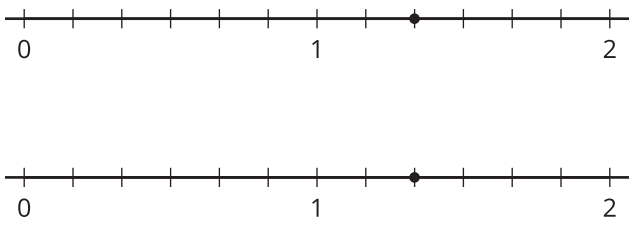
What do you notice? What do you wonder?



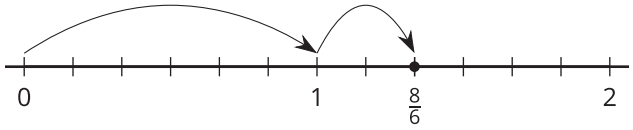
Activity 1

Sum of Jumps

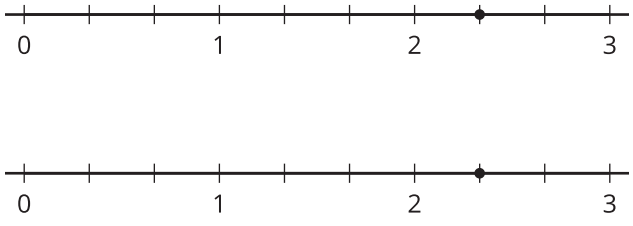
1. a. On each number line, draw two jumps to show how to use sixths to make a sum of $\frac{8}{6}$. Then write an equation to represent each combination of jumps.



b. Noah draws the following diagram and writes: $\frac{8}{6} = \frac{6}{6} + \frac{2}{6}$ and $\frac{8}{6} = 1 + \frac{2}{6}$. Which equation is correct? Explain your reasoning.



2. a. On each number line, draw jumps to show how to use thirds to make a sum of $\frac{7}{3}$. Then write an equation to represent each combination of jumps.



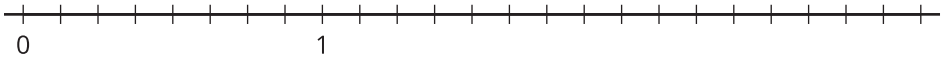
b. Write $\frac{7}{3}$ as a sum of a whole number and a fraction.

Activity 2

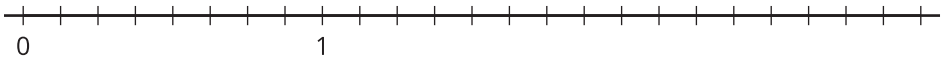
What Is the Sum?

1. Use a number line to represent each addition expression and find its value.

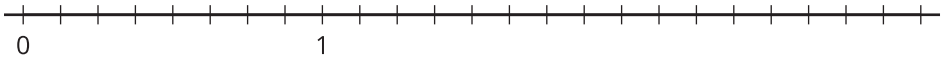
   a. $\frac{5}{8} + \frac{2}{8}$

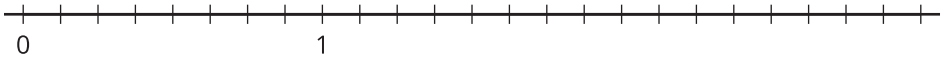
   b. $\frac{1}{8} + \frac{9}{8}$

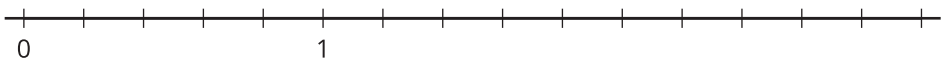
   c. $\frac{11}{8} + \frac{9}{8}$

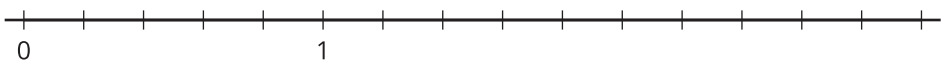
   

   d. $2\frac{1}{8} + \frac{4}{8}$

2. Priya says the sum of $1\frac{2}{5}$ and $\frac{4}{5}$ is $1\frac{6}{5}$. Kiran says the sum is $\frac{11}{5}$. Tyler says it is $2\frac{1}{5}$. Do you agree with any of them? Explain or show your reasoning. Use 1 or more number lines if you find them helpful.



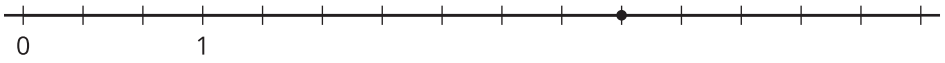


Activity 3

Jump Forward

Here are four number lines. There is a point on each number line.

1.



2.

3.

4.

For each number line, label the point with the fraction it represents. This is your target. Make 2 forward jumps to get from 0 to the target.

- Pick a card from the set given to you. Use the fraction on it for your first jump. Draw the jump and label it with the fraction.
- From that point, draw the second jump to reach the target. What fraction do you need to add? Label the jump with the fraction.
- Write an equation to represent the sum of your two fractions.