



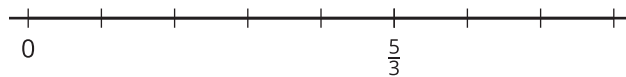
# Addition of Fractions

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

Warm-up

## Notice and Wonder: A Fraction on a Number Line

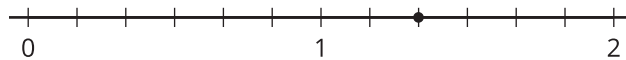
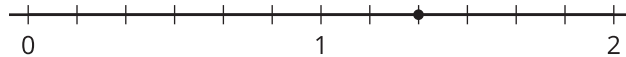
What do you notice? What do you wonder?



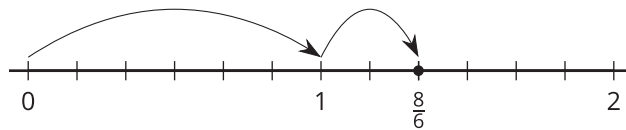
## Activity 1

### 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.

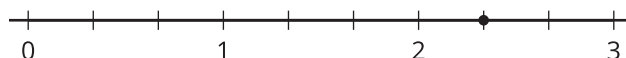
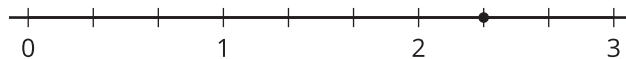



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2. a. On each number line, draw jumps to show how to use thirds to make a sum of  $\frac{7}{3}$ . Then write an equation to represent each combination of jumps.



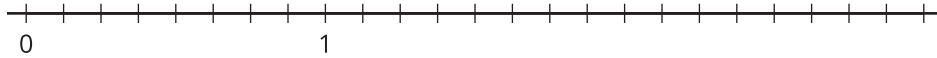
- b. Write  $\frac{7}{3}$  as a sum of a whole number and a fraction.

## Activity 2

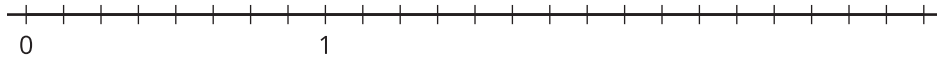
### What Is the Sum?

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

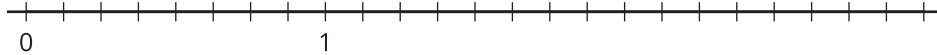
a.  $\frac{5}{8} + \frac{2}{8}$



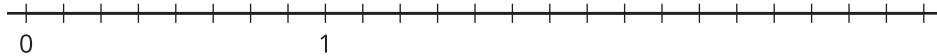
b.  $\frac{1}{8} + \frac{9}{8}$



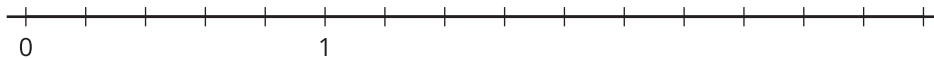
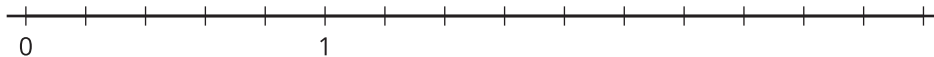
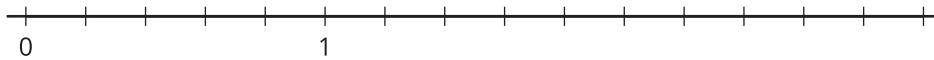
c.  $\frac{11}{8} + \frac{9}{8}$



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.

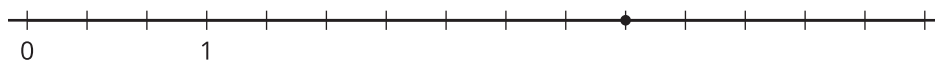


## Activity 3

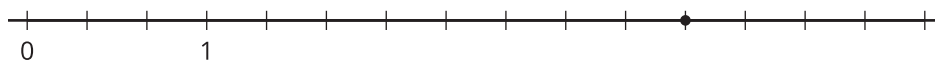
### Jump Forward

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

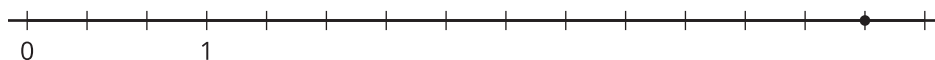
1.



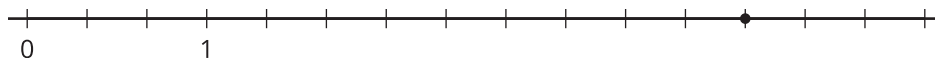
2.



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.