

# Homework & Practice 9-7

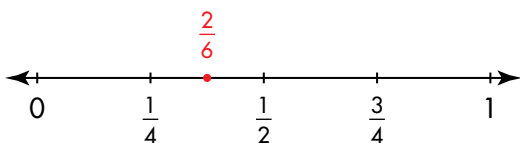
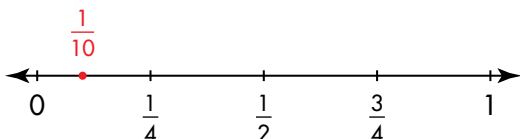
## Estimate Fraction Sums and Differences

### Another Look!

Jake ran  $\frac{1}{10}$  of the distance to the school and walked  $\frac{2}{6}$  of the distance. Estimate what fraction of the distance Jake still needs to travel to get to school.



Use the benchmark fractions on the number lines to help you.



$\frac{1}{10} + \frac{2}{6}$  is close to but greater than  $0 + \frac{1}{4} = \frac{1}{4}$ .

The whole distance to school is  $\frac{4}{4}$  or 1.

$$\frac{4}{4} - \frac{1}{4} = \frac{3}{4}$$

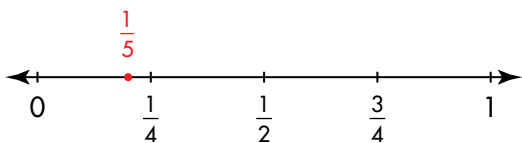
Jake still needs to travel close to, but less than  $\frac{3}{4}$  of the distance to get to school.

Think:  $\frac{1}{10}$  is close to but greater than 0.

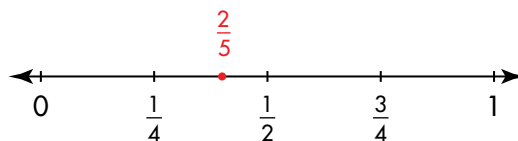
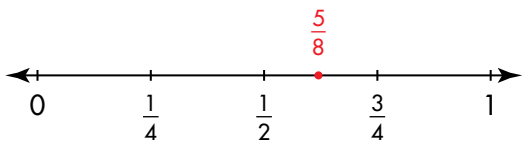
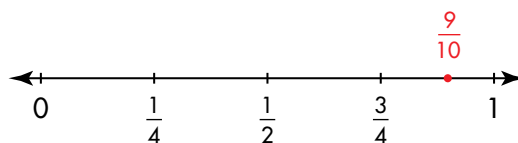
$\frac{2}{6}$  is close to but greater than  $\frac{1}{4}$ .

For **1–8**, estimate whether each sum or difference is reasonable. If it is **NOT** reasonable, estimate the sum or difference.

1.  $\frac{1}{5} + \frac{5}{8}$  is about  $\frac{3}{4}$ .



2.  $\frac{9}{10} - \frac{2}{5}$  is about  $\frac{1}{4}$ .



3.  $\frac{1}{5} + \frac{1}{2} > 1$

4.  $\frac{2}{5} + \frac{2}{3} > 1$

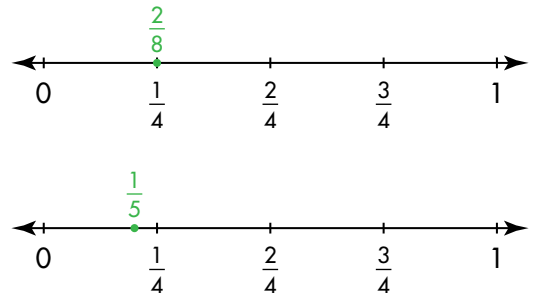
5.  $\frac{3}{3} + \frac{4}{3} < 2$

6.  $\frac{7}{10} - \frac{2}{5} < \frac{1}{2}$

7.  $\frac{9}{10} - \frac{1}{3} < \frac{1}{2}$

8.  $\frac{7}{6} - \frac{1}{2} > 1$

9. **MP.4 Model with Math** Elena ate  $\frac{2}{8}$  of a pizza and Dylan ate  $\frac{1}{5}$ . Use the number lines and benchmark fractions to estimate how much of the pizza they ate. Explain.



10. Kara's grandmother is knitting a baby cap. She knitted  $\frac{1}{5}$  of the cap yesterday morning. By evening, she had knitted  $\frac{7}{10}$  of the cap. Estimate how much of the cap she knitted during the afternoon.
11. **Math and Science** Drums can be used to communicate. If a drummer beats his drum 240 times in a message, how many drum beats will be made if he plays the message twice.
12. In a beaded necklace,  $\frac{3}{12}$  of the beads are blue and  $\frac{1}{3}$  are green. Use benchmark fractions to estimate about what fraction of the beads are blue or green. Explain.
13. **Higher Order Thinking** Jonathan spends  $\frac{2}{8}$  of his money on food,  $\frac{1}{5}$  of his money on fuel, and  $\frac{2}{10}$  of his money on clothes. Estimate what fraction of his money Jonathan has left. Explain.

### **Common Core Assessment**

14. Margaret's bottle of shampoo is  $\frac{7}{8}$  full. She uses  $\frac{1}{3}$  of the shampoo in the bottle to wash the dog. Estimate what fraction of the shampoo is left. Use whole numbers and benchmark fractions to explain.

You can draw a number line to find benchmark fractions.

