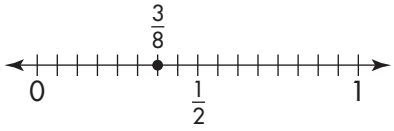
Name _____

Reteaching
9-4

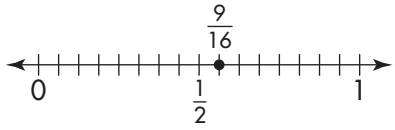
Estimating Sums and Differences of Fractions

To estimate the sum or difference of two fractions, replace each fraction with the nearest half or whole. You can use a number line to check whether each fraction is closest to 0, $\frac{1}{2}$, or 1. Estimate the sum of $\frac{3}{8} + \frac{9}{16}$.

Step 1: Find $\frac{3}{8}$ on the number line. Is $\frac{3}{8}$ closer to 0 or $\frac{1}{2}$? _____



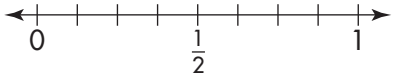
Step 2: Find $\frac{9}{16}$ on the number line. Is $\frac{9}{16}$ closer to $\frac{1}{2}$ or to 1? _____



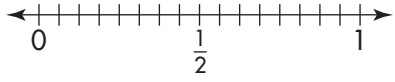
Step 3: Add to find the estimate. $\frac{1}{2} + \frac{1}{2} = 1$.

For **1** and **2**, complete each sentence to help you replace each fraction with the nearest half or whole. Use each number line to help.

1. $\frac{7}{8}$ is between _____ and _____ but is closer to _____. $\frac{7}{8}$ rounds to _____



2. $\frac{5}{16}$ is between _____ and _____ but is closer to _____. $\frac{5}{16}$ rounds to _____



For **3** through **10**, estimate each sum or difference by replacing each fraction with 0, $\frac{1}{2}$, or 1.

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

4. $\frac{7}{8} - \frac{4}{9}$

5. $\frac{1}{2} + \frac{4}{7}$

6. $\frac{7}{12} - \frac{4}{9}$

7. $\frac{7}{15} + \frac{6}{10}$

8. $\frac{2}{3} - \frac{4}{8}$

9. $\frac{2}{9} + \frac{4}{5}$

10. $\frac{7}{8} - \frac{5}{6}$

Name _____

Practice
9-4

Estimating Sums and Differences of Fractions

In **1** through **8**, tell if each fraction is closest to 0, $\frac{1}{2}$, or 1. You may use a number line to help.

1. $\frac{1}{9}$ _____ **2.** $\frac{5}{9}$ _____ **3.** $\frac{11}{20}$ _____ **4.** $\frac{6}{10}$ _____

5. $\frac{6}{7}$ _____ **6.** $\frac{5}{12}$ _____ **7.** $\frac{3}{4}$ _____ **8.** $\frac{12}{15}$ _____

In **9** through **16**, estimate each sum or difference by replacing each fraction with 0, $\frac{1}{2}$, or 1.

9. $\frac{7}{12} + \frac{4}{5}$ **10.** $\frac{1}{12} + \frac{2}{4}$ **11.** $\frac{4}{9} - \frac{1}{6}$ **12.** $\frac{2}{6} + \frac{8}{9}$

13. $\frac{1}{6} - \frac{1}{8}$ **14.** $\frac{2}{5} - \frac{3}{7}$ **15.** $\frac{7}{8} - \frac{7}{9}$ **16.** $\frac{5}{12} + \frac{2}{5}$

17. Which is the best estimate for the difference of $\frac{9}{16} - \frac{4}{9}$?

A $1 - 1 = 0$ **C** $1 - \frac{1}{2} = \frac{1}{2}$

B $\frac{1}{2} - \frac{1}{2} = 0$ **D** $0 - 0 = 0$

18. Which fraction can NOT be replaced with $\frac{1}{2}$ when estimating?

A $\frac{10}{12}$ **C** $\frac{4}{10}$

B $\frac{2}{6}$ **D** $\frac{13}{24}$

19. Mia estimated $\frac{5}{8} + \frac{1}{9}$ by replacing $\frac{5}{8}$ with 1 and $\frac{1}{9}$ with 0. Her estimated sum was $1 + 0 = 1$. Explain why Mia's estimate is NOT accurate.

_____

_____

_____

