

6-6

Name _____ Date _____

Subtracting Mixed Numbers with Renaming

(pages 250–253)

When you subtract mixed numbers, sometimes the fraction in the number you are subtracting is greater than the fraction in the number you are subtracting from. When this happens, you must rename the first fraction as an improper fraction in order to subtract.

EXAMPLE

Find $12\frac{1}{3} - 8\frac{3}{5}$.

The LCM of 3 and 5 is 15.

$$\begin{array}{r} 12\frac{1}{3} \rightarrow 12\frac{5}{15} \\ -8\frac{3}{5} \rightarrow -8\frac{9}{15} \\ \hline \end{array}$$

Since $\frac{9}{15}$ is greater than $\frac{5}{15}$, rename $12\frac{5}{15}$ as $11\frac{20}{15}$, and then subtract.

$$\begin{array}{r} 11\frac{20}{15} \\ -8\frac{9}{15} \\ \hline 3\frac{11}{15} \end{array}$$

Try These Together

Subtract. Write the answer in simplest form.

1. $4\frac{3}{10} - 1\frac{7}{10}$

HINT: Rename the fraction in the first mixed number.

2. $8\frac{3}{14} - 5\frac{5}{7}$

HINT: First find the LCD. Then rename using the LCD. Then, rename the first fraction as an improper fraction.

PRACTICE

Subtract. Write the answer in simplest form.

3. $9\frac{5}{12} - 4\frac{11}{12}$

4. $4\frac{3}{10} - 2\frac{9}{10}$

5. $7\frac{2}{5} - 6\frac{3}{10}$

6. $18\frac{3}{4} - 7\frac{7}{8}$

7. $5\frac{3}{8} - 1\frac{5}{8}$

8. $9\frac{1}{6} - 7\frac{2}{5}$

9. $4\frac{3}{4} - 3\frac{1}{8}$

10. $3\frac{1}{2} - 1\frac{5}{8}$

11. $18 - \frac{5}{6}$

12. **Algebra** Solve the equation $m = 9\frac{5}{8} - 6\frac{4}{5}$. Write the solution in simplest form.



13. **Standardized Test Practice** Sam swam $2\frac{3}{8}$ hours on Saturday and $3\frac{1}{3}$ hours on Sunday. How many more hours did he swim on Sunday than on Saturday?

A $1\frac{1}{24}$

B $\frac{23}{24}$

C $1\frac{3}{8}$

D $1\frac{1}{4}$

Answers: 1. $2\frac{5}{12}$ 2. $2\frac{2}{7}$ 3. $4\frac{2}{1}$ 4. $1\frac{5}{2}$ 5. $1\frac{1}{1}$ 6. $10\frac{7}{7}$ 7. $3\frac{4}{3}$ 8. $1\frac{30}{28}$ 9. $1\frac{5}{5}$ 10. $1\frac{8}{5}$ 11. $17\frac{6}{7}$ 12. $2\frac{40}{38}$ 13. B.