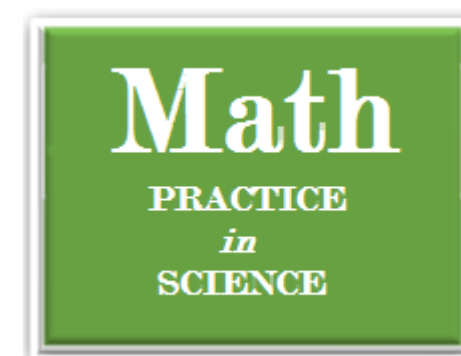


038 Math Practice

Subtraction with Renaming



Sometimes, when you subtract with fractions, you have to rename the numbers. Sometimes you have to change whole numbers to mixed numbers. A *mixed number* is a whole number with a fraction. At other times, you have to change a mixed number to a mixed number with an improper fraction. An *improper fraction* is a fraction with a larger number in the numerator than in the denominator.

When you make these changes, keep this in mind: Each whole number can be changed into a fraction with a numerator and a denominator that are the same.

$$1 = \begin{array}{|c|c|} \hline \frac{1}{2} & \frac{1}{2} \\ \hline \end{array} = \begin{array}{|c|c|c|} \hline \frac{1}{3} & \frac{1}{3} & \frac{1}{3} \\ \hline \end{array} = \begin{array}{|c|c|c|c|} \hline \frac{1}{4} & \frac{1}{4} & \frac{1}{4} & \frac{1}{4} \\ \hline \end{array} = \begin{array}{|c|c|c|c|c|} \hline \frac{1}{5} & \frac{1}{5} & \frac{1}{5} & \frac{1}{5} & \frac{1}{5} \\ \hline \end{array}$$
$$1 = \frac{2}{2} = \frac{3}{3} = \frac{4}{4} = \frac{5}{5}$$

Example Subtract $5\frac{7}{8}$ from 18.

Step 1: $18 = 17 + 1 =$

(mixed number with an improper fraction)

Step 2: Subtract.

$$\begin{array}{r} 17\frac{8}{8} \\ - 5\frac{7}{8} \\ \hline 12\frac{1}{8} \end{array}$$

Example Subtract $10\frac{3}{7}$ from $15\frac{1}{7}$.

Step 1: $15\frac{1}{7} = 14 + 1 + \frac{1}{7}$

$$= 14 + \frac{7}{7} + \frac{1}{7} =$$

(mixed number with an improper fraction)

Step 2: Subtract.

$$\begin{array}{r} 14\frac{8}{7} \\ - 10\frac{3}{7} \\ \hline 4\frac{5}{7} \end{array}$$

Subtract these fractions. Express your answers in lowest terms.

1.
$$\begin{array}{r} 6\frac{5}{17} \\ - 2\frac{8}{17} \\ \hline \end{array}$$

2.
$$\begin{array}{r} 16 \\ - 4\frac{3}{5} \\ \hline \end{array}$$

3.
$$\begin{array}{r} 18\frac{1}{7} \\ - 6\frac{5}{21} \\ \hline \end{array}$$

4.
$$\begin{array}{r} 8\frac{1}{4} \\ - 3\frac{11}{36} \\ \hline \end{array}$$

5.
$$\begin{array}{r} 4 \\ - 2\frac{8}{11} \\ \hline \end{array}$$

6.
$$\begin{array}{r} 19\frac{1}{8} \\ - 5\frac{5}{6} \\ \hline \end{array}$$

7.
$$\begin{array}{r} 21\frac{2}{5} \\ - 6\frac{4}{5} \\ \hline \end{array}$$

8.
$$\begin{array}{r} 8\frac{9}{11} \\ - 2\frac{10}{11} \\ \hline \end{array}$$

9.
$$\begin{array}{r} 53\frac{2}{21} \\ - 4\frac{5}{21} \\ \hline \end{array}$$

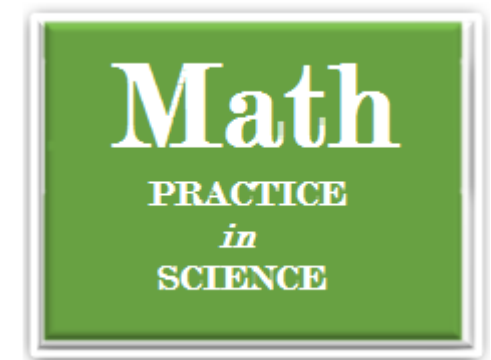
10.
$$\begin{array}{r} 56\frac{2}{10} \\ - 6\frac{4}{9} \\ \hline \end{array}$$

11.
$$\begin{array}{r} 19\frac{2}{9} \\ - 8\frac{3}{4} \\ \hline \end{array}$$

12.
$$\begin{array}{r} 15 \\ - 8\frac{3}{21} \\ \hline \end{array}$$

039 Math Practice

Multiplying Fractions



You multiply fractions by multiplying the numerators and then multiplying the denominators.

Example: $\frac{5}{6} \times \frac{1}{2} = ?$
 $\frac{5}{6} \times \frac{1}{2} = \frac{5}{12}$ ← because $5 \times 1 = 5$
← because $6 \times 2 = 12$

Often, you can simplify the problem before multiplying.

Example: $\frac{4}{15} \times \frac{5}{7} = ?$
 $\frac{4}{\cancel{15}^3} \times \frac{\cancel{5}^1}{7} = ?$ Divide the 15 and 5 by the common factor of 5. Then multiply.
 $\frac{4}{3} \times \frac{1}{7} = \frac{4}{21}$ ← because $4 \times 1 = 4$
← because $3 \times 7 = 21$

Multiply. Express your answers in lowest terms.

1. $\frac{2}{11} \times \frac{5}{1} =$

2. $\frac{8}{13} \times \frac{26}{27} =$

3. $\frac{5}{16} \times \frac{8}{10} =$

4. $\frac{9}{20} \times \frac{8}{9} =$

5. $\frac{13}{14} \times \frac{7}{8} =$

6. $\frac{5}{6} \times \frac{3}{4} =$

7. $\frac{7}{8} \times \frac{5}{14} =$

8. $\frac{8}{9} \times \frac{27}{32} =$

9. $\frac{4}{17} \times \frac{17}{18} =$

10. $\frac{4}{7} \times \frac{5}{6} =$

11. $\frac{5}{8} \times \frac{8}{13} =$

12. $\frac{6}{7} \times \frac{4}{6} =$

13. $\frac{15}{16} \times \frac{32}{45} =$

14. $\frac{8}{14} \times \frac{7}{8} =$

15. $\frac{5}{6} \times \frac{6}{11} =$

16. $\frac{6}{13} \times \frac{9}{18} =$

17. $\frac{4}{27} \times \frac{1}{4} =$

18. $\frac{6}{28} \times \frac{7}{12} =$

19. $\frac{8}{20} \times \frac{20}{32} =$

20. $\frac{1}{16} \times \frac{8}{13} =$

21. $\frac{3}{15} \times \frac{5}{16} =$

22. $\frac{7}{24} \times \frac{8}{42} =$

23. $\frac{7}{50} \times \frac{25}{14} =$

24. $\frac{4}{27} \times \frac{9}{16} =$