038 Math Practice

Subtraction with Renaming

Math
PRACTICE
in
SCIENCE

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.

$1 = \boxed{\frac{1}{2}\ \frac{1}{2}} = \boxed{\frac{1}{3}\ \frac{1}{3}\ \frac{1}{3}} = \boxed{\frac{1}{4}\ \frac{1}{4}\ \frac{1}{4}\ \frac{1}{4}} = \boxed{\frac{1}{5}\ \frac{1}{5}\ \frac{1}{5}\ \frac{1}{5}\ \frac{1}{5}}$

$1 = \frac{2}{2} = \frac{3}{3} = \frac{4}{4} = \frac{5}{5}$

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

Step 1: $18 = 17 + 1 =$ $17\frac{8}{8}$
(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: $15\frac{1}{7} = 14 + 1 + \frac{1}{7}$

$= 14 + \frac{7}{7} + \frac{1}{7} =$ $14\frac{8}{7}$
(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. $6\frac{5}{17} - 2\frac{8}{17}$

2. $16 - 4\frac{3}{5}$

3. $18\frac{1}{7} - 6\frac{5}{21}$

4. $8\frac{1}{4} - 3\frac{11}{36}$

5. $4 - 2\frac{8}{11}$

6. $19\frac{1}{8} - 5\frac{5}{6}$

7. $21\frac{2}{5} - 6\frac{4}{5}$

8. $8\frac{9}{11} - 2\frac{10}{11}$

9. $53\frac{2}{21} - 4\frac{5}{21}$

10. $56\frac{2}{10} - 6\frac{4}{9}$

11. $19\frac{2}{9} - 8\frac{3}{4}$

12. $15 - 8\frac{3}{21}$

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 x 1 = 5
← because 6 x 2 = 12

Often, you can simplify the problem before multiplying.

Example: $\frac{4}{15} \times \frac{5}{7} = ?$

$\frac{4}{{}_{3}\cancel{15}} \times \frac{\cancel{5}^{1}}{7} = ?$ 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 x 1 = 4
← because 3 x 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. $\frac{4}{27} \times \frac{9}{16} =$