

Adding and Subtracting Fractions with Like Denominators

Add or subtract. Simplify if possible.

$$\begin{array}{r} 1. \quad \frac{10}{12} \\ + \frac{8}{12} \\ \hline \end{array}$$

$$\begin{array}{r} 2. \quad \frac{8}{9} \\ - \frac{5}{9} \\ \hline \end{array}$$

$$\begin{array}{r} 3. \quad \frac{7}{10} \\ + \frac{2}{10} \\ \hline \end{array}$$

$$\begin{array}{r} 4. \quad \frac{2}{3} \\ - \frac{1}{3} \\ \hline \end{array}$$

$$5. \quad \frac{6}{8} + \frac{5}{8} + \frac{3}{8} = \underline{\hspace{2cm}} \quad 6. \quad \frac{8}{10} - \frac{3}{10} = \underline{\hspace{2cm}}$$

$$7. \quad \frac{1}{4} + \frac{2}{4} + \frac{3}{4} = \underline{\hspace{2cm}} \quad 8. \quad \frac{9}{11} - \frac{1}{11} = \underline{\hspace{2cm}}$$

$$9. \quad \frac{2}{5} + \frac{2}{5} + \frac{3}{5} = \underline{\hspace{2cm}} \quad 10. \quad \frac{7}{8} - \frac{3}{8} = \underline{\hspace{2cm}}$$

11. What fraction could you add to $\frac{4}{7}$ to get a sum greater than 1?

12. **Reasoning** Write three fractions, using 10 as the denominator, whose sum is 1.

13. Which of the following represents the difference between two equal fractions?

A 1

B $\frac{1}{2}$

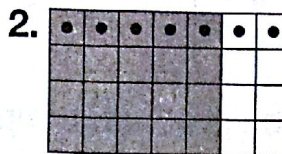
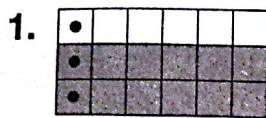
C $\frac{1}{4}$

D 0

14. **Explain It** In one night, George reads 3 chapters of a book with 27 chapters. After the second night, he has read a total of $\frac{8}{27}$ of the book. Explain how you would determine the number of chapters George read the second night. Solve the problem.

Multiplying Two Fractions

Write the multiplication problem that each model represents then solve. Put your answer in simplest form.



Find each product. Simplify if possible.

3. $\frac{7}{8} \times \frac{4}{5} =$ _____

4. $\frac{3}{7} \times \frac{2}{3} =$ _____

5. $\frac{1}{6} \times \frac{2}{5} =$ _____

6. $\frac{2}{7} \times \frac{1}{4} =$ _____

7. $\frac{2}{9} \times \frac{1}{2} =$ _____

8. $\frac{3}{4} \times \frac{1}{3} =$ _____

9. $\frac{3}{8} \times \frac{4}{9} =$ _____

10. $\frac{1}{5} \times \frac{5}{6} =$ _____

11. $\frac{2}{3} \times \frac{5}{6} \times 14 =$ _____

12. $\frac{1}{2} \times \frac{1}{3} \times \frac{1}{4} =$ _____

13. **Algebra** If $\frac{4}{5} \times \blacksquare = \frac{2}{5}$, what is \blacksquare ? _____

14. Ms. Shoemaker's classroom has 35 desks arranged in 5 by 7 rows. How many students does Ms. Shoemaker have in her class if there are $\frac{6}{7} \times \frac{4}{5}$ desks occupied? _____

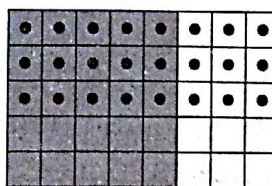
15. Which does the model represent?

A $\frac{3}{8} \times \frac{3}{5}$

C $\frac{3}{5} \times \frac{5}{8}$

B $\frac{7}{8} \times \frac{2}{5}$

D $\frac{4}{8} \times \frac{3}{5}$



16. **Explain It** Describe a model that represents $\frac{3}{3} \times \frac{4}{4}$.

Adding and Subtracting Fractions with Like Denominators

Add or subtract. Simplify if possible.

$$\begin{array}{r} 1. \quad \frac{10}{12} \\ + \frac{8}{12} \\ \hline 1\frac{1}{2} \end{array}$$

$$\begin{array}{r} 2. \quad \frac{8}{9} \\ - \frac{5}{9} \\ \hline \frac{1}{3} \end{array}$$

$$\begin{array}{r} 3. \quad \frac{7}{10} \\ + \frac{2}{10} \\ \hline \frac{9}{10} \end{array}$$

$$\begin{array}{r} 4. \quad \frac{2}{3} \\ - \frac{1}{3} \\ \hline \frac{1}{3} \end{array}$$

$$5. \quad \frac{6}{8} + \frac{5}{8} + \frac{3}{8} = 1\frac{3}{4}$$

$$6. \quad \frac{8}{10} - \frac{3}{10} = \frac{1}{2}$$

$$7. \quad \frac{1}{4} + \frac{2}{4} + \frac{3}{4} = 1\frac{1}{2}$$

$$8. \quad \frac{9}{11} - \frac{1}{11} = \frac{8}{11}$$

$$9. \quad \frac{2}{5} + \frac{2}{5} + \frac{3}{5} = 1\frac{2}{5}$$

$$10. \quad \frac{7}{8} - \frac{3}{8} = \frac{1}{2}$$

11. What fraction could you add to $\frac{4}{7}$ to get a sum greater than 1?

any fraction greater than $\frac{3}{7}$

12. Reasoning Write three fractions, using 10 as the denominator, whose sum is 1.

Possible answer: $\frac{1}{10} + \frac{3}{10} + \frac{6}{10} = 1$

13. Which of the following represents the difference between two equal fractions?

A 1

B $\frac{1}{2}$

C $\frac{1}{4}$

(D) 0

14. Explain It In one night, George reads 3 chapters of a book with 27 chapters. After the second night, he has read a total of $\frac{8}{27}$ of the book. Explain how you would determine the number of chapters George read the second night. Solve the problem.

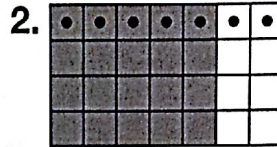
$\frac{8}{27} - \frac{3}{27} = \frac{5}{27}$; on the second night, George $\frac{5}{27} \times 27 = 5$ chapters

Multiplying Two Fractions

Write the multiplication problem that each model represents then solve. Put your answer in simplest form.



$$\frac{2}{3} \times \frac{1}{6} = \frac{2}{18} = \frac{1}{9}$$



$$\frac{5}{7} \times \frac{4}{7} = \frac{20}{49}$$

Find each product. Simplify if possible.

3. $\frac{7}{8} \times \frac{4}{5} = \frac{7}{10}$

4. $\frac{3}{7} \times \frac{2}{3} = \frac{2}{7}$

5. $\frac{1}{6} \times \frac{2}{5} = \frac{1}{15}$

6. $\frac{2}{7} \times \frac{1}{4} = \frac{1}{14}$

7. $\frac{2}{9} \times \frac{1}{2} = \frac{1}{9}$

8. $\frac{3}{4} \times \frac{1}{3} = \frac{1}{4}$

9. $\frac{3}{8} \times \frac{4}{9} = \frac{1}{6}$

10. $\frac{1}{5} \times \frac{5}{6} = \frac{1}{6}$

11. $\frac{2}{3} \times \frac{5}{6} \times 14 = 7\frac{7}{9}$

12. $\frac{1}{2} \times \frac{1}{3} \times \frac{1}{4} = \frac{1}{24}$

13. Algebra If $\frac{4}{5} \times \blacksquare = \frac{2}{5}$, what is \blacksquare ? $\frac{1}{2}$

14. Ms. Shoemaker has 35 students in her classroom. Of those students, $\frac{6}{7}$ are right-handed, and $\frac{4}{5}$ of the right-handed students have brown eyes. How many right-handed brown-eyed students are in Ms. Shoemaker's class?

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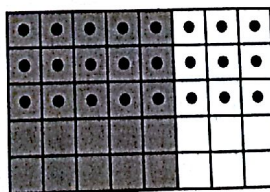
15. Which does the model represent?

A $\frac{3}{8} \times \frac{3}{5}$

C $\frac{3}{5} \times \frac{5}{8}$

B $\frac{7}{8} \times \frac{2}{5}$

D $\frac{4}{8} \times \frac{3}{5}$



16. Explain It Describe a model that represents $\frac{3}{3} \times \frac{4}{4}$.

Each fraction represents one whole, so the model would be completely shaded in for both fractions.