



Additional Practice 8-5 Multiply Two Fractions

Another Look!

Find $\frac{3}{4} \times \frac{2}{3}$.

You can multiply the numerators and denominators to find the product.



Step 1

Multiply the numerators, and then multiply the denominators.

$$\frac{3 \times 2}{4 \times 3} = \frac{6}{12} = \frac{1}{2}$$

Step 2

Check that the answer is reasonable.

Since $\frac{1}{2}$ is less than 1, the answer is reasonable.

Leveled Practice In 1–24, find each product.

$$1. \frac{7}{8} \times \frac{2}{3} = \frac{7 \times 2}{8 \times 3} = \frac{14}{24} = \frac{7}{12}$$

$$2. \frac{3}{4} \times \frac{5}{9} = \frac{3 \times 5}{4 \times 9} = \frac{15}{36} = \frac{5}{12}$$

$$3. \frac{4}{5} \times \frac{1}{8} = \frac{4 \times 1}{5 \times 8} = \frac{4}{40} = \frac{1}{10}$$

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

$$5. \frac{3}{5} \times \frac{3}{7} = \frac{3 \times 3}{5 \times 7} = \frac{9}{35}$$

$$6. \frac{4}{9} \times \frac{2}{3} = \frac{4 \times 2}{9 \times 3} = \frac{8}{27}$$

$$7. \frac{11}{12} \times \frac{2}{5} = \frac{11}{30}$$

$$8. \frac{2}{3} \times \frac{4}{5} = \frac{8}{15}$$

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

$$10. \frac{3}{4} \text{ of } \frac{1}{2} = \frac{3}{8}$$

$$11. \frac{6}{7} \times \frac{1}{5} = \frac{6}{35}$$

$$12. \frac{2}{3} \times \frac{5}{9} = \frac{10}{27}$$

$$13. \frac{1}{3} \text{ of } \frac{3}{10} = \frac{1}{10}$$

$$14. \frac{4}{5} \text{ of } \frac{5}{6} = \frac{2}{3}$$

$$15. \frac{3}{7} \times \frac{2}{7} = \frac{6}{49}$$

$$16. \frac{1}{2} \text{ of } \frac{2}{3} = \frac{1}{3}$$

$$17. \frac{4}{5} \times \frac{2}{3} = \frac{8}{15}$$

$$18. \frac{3}{10} \times \frac{3}{10} = \frac{9}{100}$$

$$19. \left(\frac{1}{2} + \frac{1}{3}\right) \times \frac{8}{9} = \frac{20}{27}$$

$$20. \left(\frac{2}{3} - \frac{1}{6}\right) \times \frac{11}{12} = \frac{11}{24}$$

$$21. \left(\frac{3}{5} + \frac{1}{4}\right) \times \frac{2}{3} = \frac{17}{30}$$

$$22. \frac{7}{8} \times \left(\frac{1}{3} + \frac{1}{3}\right) = \frac{7}{12}$$

$$23. \left(\frac{11}{12} - \frac{5}{6}\right) \times \frac{3}{4} = \frac{1}{16}$$

$$24. \frac{1}{3} \times \left(\frac{9}{10} - \frac{3}{5}\right) = \frac{1}{10}$$



25. A full bottle holds $\frac{1}{4}$ gallon of juice. If $\frac{3}{5}$ of the juice has been poured out, how much juice is left in the bottle?

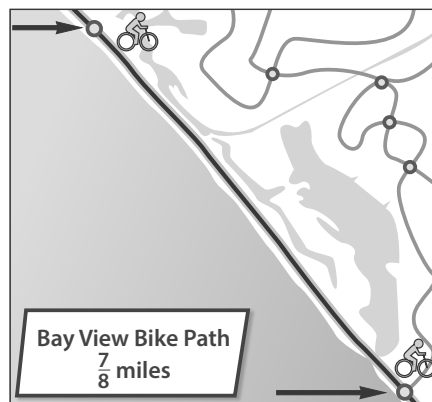
$\frac{1}{10}$ gal

26. Natasha has 3 pounds of apples and $2\frac{1}{2}$ pounds of grapes. If she gives $\frac{1}{3}$ of her apples to Silvie, how many pounds of apples does she have left?

2 pounds

27. Keyshia is riding her bike on Bay View bike path. Keyshia's bike got a flat tire $\frac{2}{3}$ of the way down the path and she had to stop. How far did Keyshia ride?

$\frac{7}{12}$ mi



28. Of the apps on Juan's tablet, $\frac{3}{4}$ are gaming apps, and $\frac{5}{7}$ of the gaming apps are action games. What fraction of the apps on Juan's tablet are action games?

$\frac{15}{28}$

29. **Higher Order Thinking** In Mrs. Hu's classroom, $\frac{4}{5}$ of the students have a dog as a pet. Of the students who have a dog as a pet, $\frac{2}{3}$ also have a cat as a pet. If there are 45 students in her class, how many have both a dog and a cat as pets?

24 students

30. Patrick walks $\frac{9}{10}$ mile to the gym. How far has he walked when he has covered $\frac{2}{3}$ of the distance to the gym?

$\frac{18}{30}$ or $\frac{3}{5}$ mi

31. **Construct Arguments** Which is greater, $\frac{4}{7} \times \frac{1}{4}$ or $\frac{4}{7} \times \frac{1}{6}$? Explain.

$\frac{4}{7} \times \frac{1}{4}$; Sample explanation: $\frac{1}{4} > \frac{1}{6}$, so $\frac{1}{4}$ of any number is greater than $\frac{1}{6}$ of the same number.



Assessment Practice

32. Choose all the multiplication sentences that have $\frac{5}{6}$ as the missing part.

- ☒ $\square \times \frac{2}{3} = \frac{5}{9}$
☐ $\frac{2}{3} \times \square = \frac{7}{9}$
☒ $\frac{11}{12} \times \frac{10}{11} = \square$
☒ $\square \times \frac{1}{5} = \frac{1}{6}$
☒ $\frac{3}{4} \times \square = \frac{5}{8}$

33. Choose all the expressions that have $\frac{8}{15}$ as a product.

- ☒ $\frac{2}{3} \times \frac{4}{5}$
☒ $\frac{8}{9} \times \frac{3}{5}$
☐ $\frac{3}{15} \times \frac{5}{15}$
☐ $\frac{7}{10} \times \frac{1}{5}$
☒ $\frac{11}{15} \times \frac{8}{11}$