REVIEW: Multiplying Fractions

Name _____

Key Concept and Vocabulary

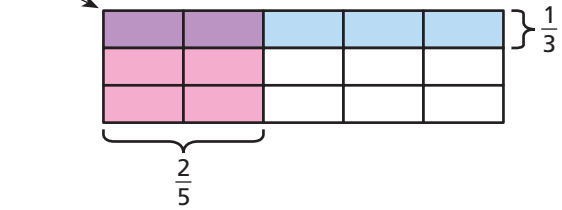
Multiply numerators.

$\frac{1}{3} \times \frac{2}{5} = \frac{1 \times 2}{3 \times 5} = \frac{2}{15}$

Multiply denominators.

Visual Model

2 out of 15 parts are shaded twice.



Skill Examples

1. $\frac{2}{3} \times \frac{1}{4} = \frac{2 \times 1}{3 \times 4} = \frac{2}{12} = \frac{1}{6}$
2. $\frac{3}{8} \times \frac{4}{5} = \frac{3 \times 4}{8 \times 5} = \frac{12}{40} = \frac{3}{10}$
3. $\frac{2}{5} \times \frac{1}{4} = \frac{2 \times 1}{5 \times 4} = \frac{2}{20} = \frac{1}{10}$
4. $\frac{5}{6} \times \frac{3}{4} = \frac{5 \times 3}{6 \times 4} = \frac{15}{24} = \frac{5}{8}$

Application Example

5. A recipe calls for $\frac{3}{4}$ cup of flour. You want to make $\frac{1}{2}$ of the recipe. How much flour do you need?

$\frac{1}{2} \times \frac{3}{4} = \frac{1 \times 3}{2 \times 4} = \frac{3}{8}$

∴ You need $\frac{3}{8}$ cup flour.

PRACTICE MAKES *PURR*-FECT®

Check your answers at BigIdeasMath.com.

Find the product.

6. $\frac{1}{3} \times \frac{3}{8} =$ $\frac{3}{24}$, or $\frac{1}{8}$
7. $\frac{1}{2} \times \frac{1}{4} =$ $\frac{1}{8}$
8. $\frac{1}{10} \times \frac{3}{10} =$ $\frac{3}{100}$
9. $\frac{3}{2} \times \frac{2}{5} =$ $\frac{6}{10}$, or $\frac{3}{5}$
10. $\frac{3}{8} \times \frac{1}{2} =$ $\frac{3}{16}$
11. $\frac{1}{5} \times \frac{2}{5} =$ $\frac{2}{25}$
12. $\frac{2}{3} \times \frac{2}{3} =$ $\frac{4}{9}$
13. $\frac{3}{2} \times \frac{2}{3} =$ $\frac{6}{6}$, or 1
14. $\frac{3}{1} \times \frac{1}{3} =$ $\frac{3}{3}$, or 1
15. $\frac{5}{12} \times \frac{5}{2} =$ $\frac{25}{24}$
16. $\frac{15}{8} \times \frac{6}{5} =$ $\frac{90}{40}$, or $\frac{9}{4}$
17. $\frac{1}{3} \times \frac{3}{4} \times \frac{4}{5} =$ $\frac{12}{60}$, or $\frac{1}{5}$

Find the area of the rectangle.

18. $\frac{1}{2}$ ft, $\frac{1}{2}$ ft

Area = $\frac{1}{4}$ ft^2

19. $\frac{3}{10}$ cm, $\frac{1}{2}$ cm

Area = $\frac{3}{20}$ cm^2

20. $\frac{3}{8}$ in., $\frac{5}{8}$ in.

Area = $\frac{15}{64}$ in.^{2}

21. $\frac{2}{5}$ m, $\frac{3}{5}$ m

Area = $\frac{6}{25}$ m^2

22. **OPEN-ENDED** Find three different pairs of fractions that have the same product.

Sample answer: $\frac{9}{10} \cdot \frac{5}{6} = \frac{3}{4}$ $\quad \frac{7}{8} \cdot \frac{6}{7} = \frac{3}{4}$ $\quad \frac{4}{5} \cdot \frac{15}{16} = \frac{3}{4}$