

Multiplying a Fraction and a Whole Number

Find $12 \times \frac{1}{4}$.

$12 \times \frac{1}{4}$ is the same as dividing
12 by 4.

$$12 \div 4 = 3$$

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

Find $\frac{3}{5}$ of 15, or $\frac{3}{5} \times 15$.

$$15 \div 5 = 3, \text{ so } \frac{1}{5} \times 15 = 3.$$

Since $\frac{3}{5}$ is 3 times $\frac{1}{5}$,

$$\frac{3}{5} \times 15 = 3 \times \left(\frac{1}{5} \times 15\right) = 3 \times 3 = 9.$$

$$\frac{3}{5} \times 15 = 9$$

Find each product.

1. $\frac{4}{5} \times 20 =$ _____

2. $\frac{6}{7}$ of 14 = _____

3. $24 \times \frac{3}{4} =$ _____

4. $\frac{2}{5}$ of 15 = _____

5. $400 \times \frac{3}{8} =$ _____

6. $\frac{7}{10}$ of 80 = _____

7. **Reasoning** Can you use division and mental math to find $\frac{2}{3}$ of 24?
Why or why not?

The chart shows the average high temperatures for different months in Phoenix, Arizona.

Phoenix Weather

Month	Average High
February	70°F
May	93°F
July	105°F

8. What is $\frac{4}{5}$ the average temperature in July?

9. What is $\frac{1}{2}$ the average temperature in February?

10. What is $\frac{2}{3}$ the average temperature in May?

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Find each product.

1. $\frac{3}{4} \times 16 =$ _____ 2. $\frac{5}{6} \times 30 =$ _____ 3. $42 \times \frac{5}{6} =$ _____

4. $\frac{1}{8}$ of 72 = _____ 5. $900 \times \frac{2}{3} =$ _____ 6. $\frac{13}{20}$ of 100 = _____

7. **Reasoning** Without multiplying, tell which is greater, $\frac{5}{6}$ of 81 or $\frac{9}{10}$ of 81. Explain.

Driving Distances

Departure City	Destination City	Distance
Pittsfield, Massachusetts	Providence, Rhode Island	132 mi
Reno, Nevada	Wendover, Utah	400 mi

8. Mike drove $\frac{1}{3}$ of the distance between Pittsfield, Massachusetts, and Providence, Rhode Island. How far did he drive?

9. Bimal drove $\frac{3}{5}$ of the distance between Reno, Nevada, and Wendover, Utah. How far did he drive?

10. **Estimation** How many more miles does Bimal have to drive to get to Wendover, Utah?

Test Prep

11. There are 25 students in Mr. Fitch's sixth-grade class. If $\frac{3}{5}$ of the students are girls, how many girls are in Mr. Fitch's class?

A. 5 girls B. 10 girls C. 15 girls D. 20 girls

12. **Writing in Math** Explain how you would find the product of 36 and $\frac{2}{3}$.
