Name _____ Date _____ Class _____

# SKILL 17: Dividing a Fraction by a Whole Number

To divide a fraction by a whole number, write the whole number as an improper fraction. Then divide the fractions.

## Example

**Find $\frac{5}{6} \div 3$ in simplest form.**

$\frac{5}{6} \div 3 = \frac{5}{6} \div \frac{3}{1}$ Write the whole number as an improper fraction.

$= \frac{5}{6} \times \frac{1}{3}$ Write the reciprocal of the divisor and change the division to multiplication.

$= \frac{5 \times 1}{6 \times 3}$ Multiply.

$= \frac{5}{18}$ Check that your answer is in simplest form.

So, $\frac{5}{6} \div 3 = \frac{5}{18}$.

## Guided Practice

**Find each quotient in simplest form.**

**1.** Divide: $\frac{3}{4} \div 9$.

**a.** 9 as an improper fraction is $\frac{\square}{\square}$.

**b.** The reciprocal of 9 is $\frac{\square}{\square}$.

**c.** $\frac{3}{4} \div 9 = \frac{\square}{\square} \times \frac{\square}{\square} =$ _____

**2.** Divide: $\frac{3}{8} \div 4$.

**a.** 4 as an improper fraction is $\frac{\square}{\square}$.

**b.** The reciprocal of 4 is $\frac{\square}{\square}$.

**c.** $\frac{3}{8} \div 4 = \frac{\square}{\square} \times \frac{\square}{\square} =$ _____

**3.** Divide: $\frac{4}{5} \div 6$.

**a.** 6 as an improper fraction is $\frac{\square}{\square}$.

**b.** The reciprocal of 6 is $\frac{\square}{\square}$.

**c.** $\frac{4}{5} \div 6 = \frac{\square}{\square} \times \frac{\square}{\square} =$ _____

**4.** Divide: $\frac{5}{7} \div 3$.

**a.** 3 as an improper fraction is $\frac{\square}{\square}$.

**b.** The reciprocal of 3 is $\frac{\square}{\square}$.

**c.** $\frac{5}{7} \div 3 = \frac{\square}{\square} \times \frac{\square}{\square} =$ _____

**5.** $\frac{1}{5} \div 3 = \frac{\square}{\square} \times \frac{\square}{\square} =$ _____

**6.** $\frac{3}{4} \div 2 = \frac{\square}{\square} \times \frac{\square}{\square} =$ _____

**7.** $\frac{2}{3} \div 9 = \frac{\square}{\square} \times \frac{\square}{\square} =$ _____

**8.** $\frac{2}{5} \div 4 = \frac{\square}{\square} \times \frac{\square}{\square} =$ _____

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## SKILL 17: Practice

**Divide. Simplify each quotient.**

1. $\frac{3}{5} \div 5 =$ _____
2. $\frac{2}{7} \div 4 =$ _____
3. $\frac{9}{11} \div 3 =$ _____
4. $\frac{2}{3} \div 10 =$ _____
5. $\frac{3}{4} \div 12 =$ _____
6. $\frac{4}{5} \div 10 =$ _____
7. $\frac{1}{6} \div 3 =$ _____
8. $\frac{3}{5} \div 2 =$ _____
9. $\frac{6}{11} \div 4 =$ _____
10. $\frac{3}{5} \div 4 =$ _____
11. $\frac{5}{9} \div 10 =$ _____
12. $\frac{3}{8} \div 6 =$ _____
13. $\frac{3}{8} \div 9 =$ _____
14. $\frac{5}{6} \div 2 =$ _____
15. $\frac{3}{4} \div 4 =$ _____
16. $\frac{3}{10} \div 6 =$ _____
17. $\frac{4}{11} \div 6 =$ _____
18. $\frac{4}{5} \div 8 =$ _____
19. $\frac{5}{12} \div 10 =$ _____
20. $\frac{6}{7} \div 9 =$ _____
21. $\frac{6}{7} \div 3 =$ _____
22. $\frac{2}{3} \div 5 =$ _____
23. $\frac{5}{6} \div 3 =$ _____
24. $\frac{5}{8} \div 2 =$ _____

**Solve.**

25. A carpenter cuts a board that is $\frac{3}{4}$ meter long into 6 pieces of equal length. How long is each piece? _____

26. Toni wants to store $\frac{1}{2}$ gallon of sauce in 5 containers. If she wants each container to have the same amount of sauce, how much should she put in each container? _____

**TEST PREP**

27. Find $\frac{6}{7} \div 8$ in simplest form. *Skill 17*

A $\frac{1}{9}$ C $\frac{7}{28}$

B $\frac{3}{28}$ D $6\frac{6}{7}$

28. Find $4\frac{1}{3} \times 1\frac{1}{2}$ in simplest form. *Skill 12*

F $4\frac{1}{6}$ H $5\frac{1}{5}$

G $4\frac{1}{3}$ J $6\frac{1}{2}$