

# Multiplying Fractions

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Score: \_\_\_\_\_ / 24

## Q Quick Review

Multiplying fractions is wonderfully simple: **multiply the numerators together** and **multiply the denominators together**.

So  $\frac{2}{3} \times \frac{3}{4} = \frac{2 \times 3}{3 \times 4} = \frac{6}{12}$ . There is no need for a common denominator. To make the work easier, you can **cancel common factors** before multiplying — divide a numerator and a denominator by a shared factor. Always **simplify** the final answer.

Remember: “of” usually means multiply, so  $\frac{1}{2}$  of  $\frac{4}{5}$  means  $\frac{1}{2} \times \frac{4}{5}$ .

◇ **Example:** Multiply  $\frac{2}{3} \times \frac{3}{4}$ .

⇒ Multiply straight across. The numerators:  $2 \times 3 = 6$ . The denominators:  $3 \times 4 = 12$ . That gives  $\frac{6}{12}$ . Now simplify — the greatest common factor of 6 and 12 is 6, so  $\frac{6}{12} = \frac{1}{2}$ . (Tip: you could also cancel the 3 on top with the 3 on bottom first, which gets you to  $\frac{1}{2}$  even faster.)

**Answer:**  $\frac{1}{2}$

## PRACTICE

Multiply. Write each answer in simplest form.

1.  $\frac{2}{3} \times \frac{3}{4}$  \_\_\_\_\_

2.  $\frac{1}{2} \times \frac{4}{5}$  \_\_\_\_\_

3.  $\frac{3}{5} \times \frac{5}{6}$  \_\_\_\_\_

4.  $\frac{2}{7} \times \frac{7}{8}$  \_\_\_\_\_

5.  $\frac{4}{9} \times \frac{3}{8}$  \_\_\_\_\_

6.  $\frac{5}{6} \times \frac{2}{3}$  \_\_\_\_\_

7.  $\frac{3}{4} \times \frac{8}{9}$  \_\_\_\_\_

8.  $\frac{1}{3} \times \frac{9}{10}$  \_\_\_\_\_

9.  $\frac{2}{5} \times \frac{5}{8}$  \_\_\_\_\_

10.  $\frac{7}{10} \times \frac{5}{7}$  \_\_\_\_\_

11.  $\frac{3}{8} \times \frac{4}{9}$  \_\_\_\_\_

12.  $\frac{5}{12} \times \frac{6}{7}$  \_\_\_\_\_

13.  $\frac{2}{3} \times \frac{1}{2}$  \_\_\_\_\_

14.  $\frac{4}{5} \times \frac{3}{4}$  \_\_\_\_\_

15.  $\frac{7}{8} \times \frac{2}{3}$  \_\_\_\_\_

16.  $\frac{1}{4} \times \frac{2}{5}$  \_\_\_\_\_

17.  $\frac{3}{7} \times \frac{7}{9}$  \_\_\_\_\_

18.  $\frac{5}{9} \times \frac{3}{10}$  \_\_\_\_\_

19.  $\frac{2}{9} \times \frac{3}{4}$  \_\_\_\_\_

20.  $\frac{6}{7} \times \frac{7}{12}$  \_\_\_\_\_

## ◆ Word Problems

21. A recipe makes  $\frac{3}{4}$  of a pan of brownies. Mia makes  $\frac{2}{3}$  of the recipe. What fraction of a pan does she make? \_\_\_\_\_

22. A garden takes up  $\frac{4}{5}$  of a yard. Vegetables fill  $\frac{3}{4}$  of the garden. What fraction of the yard is vegetables? \_\_\_\_\_

23. A water bottle holds  $\frac{7}{8}$  liter. Owen drinks  $\frac{2}{3}$  of it. How many liters does he drink? \_\_\_\_\_

24. A ribbon is  $\frac{5}{6}$  meter long. A craft uses  $\frac{2}{3}$  of the ribbon. How long is the piece used? \_\_\_\_\_



## Answer Keys

1.  $\frac{1}{2}$
2.  $\frac{2}{5}$
3.  $\frac{1}{2}$
4.  $\frac{1}{4}$
5.  $\frac{1}{6}$
6.  $\frac{5}{9}$
7.  $\frac{2}{3}$
8.  $\frac{3}{10}$
9.  $\frac{1}{4}$
10.  $\frac{1}{2}$
11.  $\frac{1}{6}$
12.  $\frac{5}{14}$
13.  $\frac{1}{3}$

14.  $\frac{3}{5}$
15.  $\frac{7}{12}$
16.  $\frac{1}{10}$
17.  $\frac{1}{3}$
18.  $\frac{1}{6}$
19.  $\frac{1}{6}$
20.  $\frac{1}{2}$
21.  $\frac{1}{2}$  pan
22.  $\frac{3}{5}$  of the yard
23.  $\frac{7}{12}$  liter
24.  $\frac{5}{9}$  meter

### Step-by-Step Explanations

1.  $\frac{6}{12}$  simplifies to  $\frac{1}{2}$ .
2.  $\frac{4}{10}$  simplifies to  $\frac{2}{5}$ .
3.  $\frac{15}{30}$  simplifies to  $\frac{1}{2}$ .
4.  $\frac{14}{56}$  simplifies to  $\frac{1}{4}$ .
5.  $\frac{12}{72}$  simplifies to  $\frac{1}{6}$ .
6.  $\frac{10}{18}$  simplifies to  $\frac{5}{9}$ .
7.  $\frac{24}{36}$  simplifies to  $\frac{2}{3}$ .
8.  $\frac{9}{30}$  simplifies to  $\frac{3}{10}$ .
9.  $\frac{10}{40}$  simplifies to  $\frac{1}{4}$ .
10.  $\frac{35}{70}$  simplifies to  $\frac{1}{2}$ .
11.  $\frac{12}{72}$  simplifies to  $\frac{1}{6}$ .
12.  $\frac{30}{84}$  simplifies to  $\frac{5}{14}$ .

13.  $\frac{2}{6}$  simplifies to  $\frac{1}{3}$ .
14.  $\frac{12}{20}$  simplifies to  $\frac{3}{5}$ .
15.  $\frac{14}{24}$  simplifies to  $\frac{7}{12}$ .
16.  $\frac{2}{20}$  simplifies to  $\frac{1}{10}$ .
17.  $\frac{21}{63}$  simplifies to  $\frac{1}{3}$ .
18.  $\frac{15}{90}$  simplifies to  $\frac{1}{6}$ .
19.  $\frac{6}{36}$  simplifies to  $\frac{1}{6}$ .
20.  $\frac{42}{84}$  simplifies to  $\frac{1}{2}$ .
21.  $\frac{3}{4} \times \frac{2}{3} = \frac{6}{12} = \frac{1}{2}$  pan.
22.  $\frac{13}{4} \times \frac{4}{5} = \frac{12}{20} = \frac{3}{5}$  of the yard.
23.  $\frac{3}{5} \times \frac{7}{8} = \frac{14}{24} = \frac{7}{12}$  liter.
24.  $\frac{3}{5} \times \frac{5}{6} = \frac{10}{18} = \frac{5}{9}$  meter.



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