

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. $\frac{2}{3} \times \frac{3}{4}$ | _____ | 11. $\frac{3}{8} \times \frac{4}{9}$ | _____ |
| 2. $\frac{1}{2} \times \frac{4}{5}$ | _____ | 12. $\frac{5}{12} \times \frac{6}{7}$ | _____ |
| 3. $\frac{3}{5} \times \frac{5}{6}$ | _____ | 13. $\frac{2}{3} \times \frac{1}{2}$ | _____ |
| 4. $\frac{2}{7} \times \frac{7}{8}$ | _____ | 14. $\frac{4}{5} \times \frac{3}{4}$ | _____ |
| 5. $\frac{4}{9} \times \frac{3}{8}$ | _____ | 15. $\frac{7}{8} \times \frac{2}{3}$ | _____ |
| 6. $\frac{5}{6} \times \frac{2}{3}$ | _____ | 16. $\frac{1}{4} \times \frac{2}{5}$ | _____ |
| 7. $\frac{3}{4} \times \frac{8}{9}$ | _____ | 17. $\frac{3}{7} \times \frac{7}{9}$ | _____ |
| 8. $\frac{1}{3} \times \frac{9}{10}$ | _____ | 18. $\frac{5}{9} \times \frac{3}{10}$ | _____ |
| 9. $\frac{2}{5} \times \frac{5}{8}$ | _____ | 19. $\frac{2}{9} \times \frac{3}{4}$ | _____ |
| 10. $\frac{7}{10} \times \frac{5}{7}$ | _____ | 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. $\frac{24}{56}$ simplifies to $\frac{3}{7}$.
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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