



Multiplying Fractions

KEY IDEA

Multiplying fractions is the easy one: you do **not** need a common denominator. Multiply the two numerators to get the new numerator, multiply the two denominators to get the new denominator, then simplify. An area model shows why — splitting a rectangle one way and then the other gives you numerator $\times$ numerator parts out of denominator $\times$ denominator.

How to do it

1. Multiply the numerators (the top numbers) together.
2. Multiply the denominators (the bottom numbers) together.
3. Simplify the result to lowest terms.
4. If a mixed number appears, turn it into an improper fraction first.

Worked examples

Example 1. $\frac{2}{5} \cdot \frac{3}{5} = \frac{6}{25}$

Example 2. $\frac{2}{12} \cdot \frac{2}{10} = \frac{1}{30}$

Example 3. $\frac{1}{2} \cdot \frac{6}{8} = \frac{3}{8}$

Example 4. $\frac{1}{2} \cdot \frac{7}{8} = \frac{7}{16}$





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Directions: Multiply. Give each answer in lowest terms.

1. $\frac{1}{8} \cdot \frac{1}{8}$	2. $\frac{3}{9} \cdot \frac{10}{12}$	3. $\frac{1}{2} \cdot \frac{2}{5}$
4. $\frac{2}{4} \cdot \frac{1}{8}$	5. $\frac{1}{4} \cdot \frac{3}{4}$	6. $\frac{2}{4} \cdot \frac{1}{2}$
7. $\frac{2}{6} \cdot \frac{3}{4}$	8. $\frac{2}{6} \cdot \frac{11}{12}$	9. $\frac{1}{8} \cdot \frac{4}{5}$
10. $\frac{9}{12} \cdot \frac{4}{10}$	11. $\frac{2}{8} \cdot \frac{6}{12}$	12. $\frac{1}{2} \cdot \frac{1}{2}$
13. $\frac{5}{6} \cdot \frac{4}{6}$	14. $\frac{3}{5} \cdot \frac{4}{8}$	15. $\frac{8}{9} \cdot \frac{1}{3}$
16. $\frac{5}{9} \cdot \frac{8}{10}$	17. $\frac{8}{10} \cdot \frac{2}{4}$	18. $\frac{4}{5} \cdot \frac{3}{5}$
19. $\frac{4}{6} \cdot \frac{2}{5}$	20. $\frac{2}{6} \cdot \frac{2}{3}$	21. $\frac{9}{10} \cdot \frac{5}{9}$
22. $\frac{2}{4} \cdot \frac{3}{9}$	23. $\frac{4}{9} \cdot \frac{1}{2}$	24. $\frac{9}{12} \cdot \frac{1}{3}$
25. $\frac{1}{5} \cdot \frac{4}{9}$	26. $\frac{3}{6} \cdot \frac{4}{12}$	27. $\frac{3}{4} \cdot \frac{6}{9}$
28. $\frac{2}{3} \cdot \frac{1}{5}$	29. $\frac{1}{2} \cdot \frac{1}{5}$	30. $\frac{3}{4} \cdot \frac{1}{10}$
31. $\frac{4}{8} \cdot \frac{2}{3}$	32. $\frac{1}{2} \cdot \frac{1}{3}$	33. $\frac{2}{12} \cdot \frac{8}{9}$
34. $\frac{1}{3} \cdot \frac{11}{12}$	35. $\frac{5}{10} \cdot \frac{2}{3}$	36. $\frac{11}{12} \cdot \frac{5}{8}$

