



Dividing Fractions

KEY IDEA

To divide by a fraction, multiply by its reciprocal — the same fraction turned upside down.

Teachers often say **keep, change, flip**: keep the first fraction, change the $\div$ to a $\times$, and flip the second one. It works because dividing by $\frac{1}{4}$ asks how many quarters fit, and that is the same as multiplying by 4.

How to do it

1. Keep the first fraction exactly as it is.
2. Change the division sign to a multiplication sign.
3. Flip the second fraction upside down (swap its numerator and denominator).
4. Multiply straight across, then simplify.

Worked examples

Example 1. $\frac{1}{2} \div \frac{1}{2} = 1$

Example 2. $\frac{3}{10} \div \frac{4}{6} = \frac{9}{20}$

Example 3. $\frac{2}{3} \div \frac{3}{6} = \frac{4}{3}$

Example 4. $\frac{1}{2} \div \frac{8}{12} = \frac{3}{4}$





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Directions: Divide. Give each answer in lowest terms.

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

