Dividing fractions

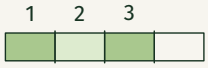
Divide fractions by multiplying by the reciprocal of the divisor, and simplify where you can.

Name _____ **Date** _____

Flip and multiply

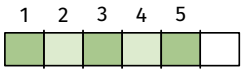
To divide by a fraction, multiply by its reciprocal (flip the numerator and denominator of the second fraction, then multiply straight across). Write a whole number as itself over 1 first. Simplify the result if the numerator and denominator share a common factor.

Worked example Find $\frac{3}{4} \div \frac{1}{4}$ using the bar.

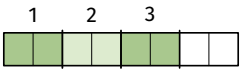


How many quarter-tiles fit in $\frac{3}{4}$? 3 tiles fit.
$\frac{3}{4} \div \frac{1}{4} = 3$.

1. How many $\frac{1}{6}$-tiles fit in $\frac{5}{6}$?



2. How many $\frac{2}{8}$-tiles fit in $\frac{6}{8}$?



3. $\frac{1}{2} \div \frac{1}{4}$.

4. $\frac{2}{3} \div \frac{1}{3}$.

5. $\frac{5}{6} \div \frac{5}{6}$.

6. $2 \div \frac{1}{2}$.

7. $\frac{1}{2} \div 2$.

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

9. $6 \div \frac{3}{4}$.

Dividing fractions (continued)

Divide fractions by multiplying by the reciprocal of the divisor, and simplify where you can.

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10. $\frac{3}{5} \div 6$.

11. Fill in the blank: $\frac{2}{3} \div \frac{\square}{5} = \frac{10}{9}$.

12. Is $\frac{3}{4} \div \frac{1}{2} = \frac{3}{8}$ correct?

13. Which is greater: $\frac{3}{4} \div \frac{1}{2}$ or $\frac{3}{4} \times \frac{1}{2}$?

14. Explain in one short sentence why dividing by $\frac{1}{2}$ makes a positive number larger.

15. A jug is $\frac{3}{4}$ full. Each pour uses $\frac{1}{8}$ of the jug. How many pours is that?

16. A student says $\frac{4}{5} \div \frac{2}{3} = \frac{8}{15}$. Are they correct? Explain.

17. $1\frac{1}{2} \div \frac{3}{4}$.

18. Find a fraction so that $\frac{2}{3} \div \square = \frac{10}{9}$.