

Understanding Division of Fractions

Divide a fraction by a whole number.

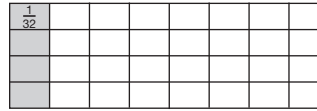
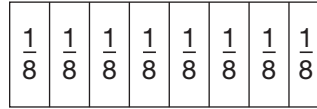
Find $\frac{1}{8} \div 4$.

Use a model to show $\frac{1}{8}$.

Divide each eighth into 4 equal parts.

Each section shows $\frac{1}{(8 \times 4)} = \frac{1}{32}$.

$$\frac{1}{8} \div 4 = \frac{1}{32}$$

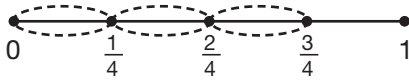


Divide a fraction by a fraction.

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

Use a number line.

Count the number of $\frac{1}{4}$ s in $\frac{3}{4}$.



There are three $\frac{1}{4}$ s.

$$\frac{3}{4} \div \frac{1}{4} = 3$$

Use repeated subtraction.

Subtract $\frac{1}{4}$ from $\frac{3}{4}$ until the difference is 0.

$$\frac{3}{4} - \frac{1}{4} = \frac{2}{4}$$

$$\frac{2}{4} - \frac{1}{4} = \frac{1}{4}$$

$$\frac{1}{4} - \frac{1}{4} = 0$$

Count the number of times you subtracted to find the quotient.

$$\frac{3}{4} \div \frac{1}{4} = 3$$

Solve each division sentence. Use a model if you wish.

1. $3 \div \frac{1}{3} =$ _____

2. $\frac{1}{5} \div 4 =$ _____

Find each quotient. Simplify if possible.

3. $3 \div \frac{1}{2} =$ _____

4. $\frac{9}{10} \div \frac{1}{10} =$ _____

5. $\frac{1}{5} \div 3 =$ _____

6. $\frac{3}{16} \div \frac{1}{16} =$ _____

7. $5 \div \frac{1}{3} =$ _____

8. $\frac{1}{2} \div 6 =$ _____

9. $8 \div \frac{1}{4} =$ _____

10. $\frac{7}{12} \div \frac{1}{12} =$ _____

11. $\frac{6}{7} \div \frac{1}{7} =$ _____

12. **Draw a Picture** The square dancing club meets for 3 hours. Every $\frac{3}{4}$ hour, the dancers change partners. How many different partners will each dancer have in one meeting? Draw a picture to show your solution.
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13. **Writing to Explain** Explain why the quotient of two fractions less than 1 is always greater than either fraction.
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