

Thank you

FOR YOUR
INTEREST IN
CORWIN

Please enjoy this complimentary excerpt from Seeing the Math You Teach, Grades K-6.

[LEARN MORE](#) about this title!

Division With Fractions



Video 12: Division With Fraction Pieces: You can use physical or virtual fraction pieces to demonstrate fraction division. *Pictured here: fraction square created in a slide deck*

<https://qrs.ly/ogg99lh>

When you **divide fractions** you are determining how many times the second number (divisor) “fits into” the first number (dividend), just like when you divide whole numbers.

$$\text{dividend} \div \text{divisor} = \text{quotient}$$

Whole Number ÷ Whole Number

$12 \div 3$

Ask, “How many groups of 3 are in 12?”

Picture Method

There are **four** groups of 3 in 12.

Whole Number ÷ Fraction

A doll's dress requires $\frac{1}{2}$ a yard of fabric. How many dresses can I make using 4 yards?

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

Ask, “How many $\frac{1}{2}$ s are in 4?”

Picture Method

There are **eight** groups of $\frac{1}{2}$ in 4.

Common Denominator Method

$$4 \div \frac{1}{2} = \frac{8}{2} \div \frac{1}{2} = \frac{8 \div 1}{2 \div 2} = \frac{8}{1} = 8$$

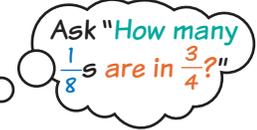
I can rename 4 as $\frac{8}{2}$ by multiplying $4 \times \frac{2}{2}$ so that my fractions have a common denominator. Then, I divide.

Division With Fractions (continued)

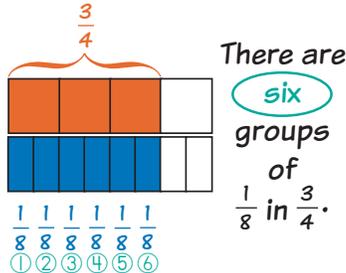
Fraction ÷ Fraction

A cookie recipe needs $\frac{1}{8}$ pounds of butter. I have $\frac{3}{4}$ pounds of butter. How many batches of cookies can I make with the butter I have?

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



Picture Method



Common Denominator Method*

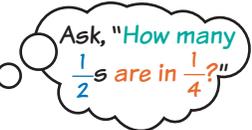
$$\frac{3}{4} \div \frac{1}{8} = \frac{6}{8} \div \frac{1}{8} = \frac{6 \div 1}{8 \div 8} = \frac{6}{1} = 6$$

* See page 104 for more help finding common denominators.

Fraction ÷ Larger Fraction

A cookie recipe needs $\frac{1}{2}$ of a pound of chocolate chips. I have $\frac{1}{4}$ of a pound of chocolate chips. How many batches of cookies can I make with the chips I have?

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

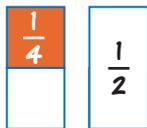


Picture Method

This represents having $\frac{1}{4}$ of the square.

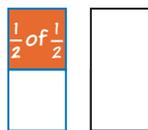


This represents dividing the square into pieces that are each $\frac{1}{2}$ of the square.



How many pieces of size $\frac{1}{2}$ of the square are in each $\frac{1}{4}$ of the square?

There is **1/2** of a piece of $\frac{1}{2}$ of the square in $\frac{1}{4}$ of the square.



Reciprocal Multiplication Method

$$\frac{1}{4} \div \frac{1}{2} = \frac{1}{4} \times \frac{2}{1} = \frac{2}{4} = \frac{1}{2}$$

