

# Interpret Division of Fractions

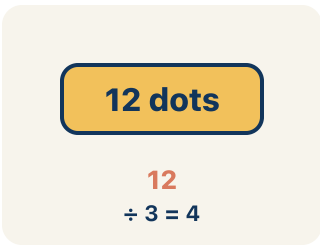
Lesson 2-1

**Name:** \_\_\_\_\_ **Date:** \_\_\_\_\_ **Class:** \_\_\_\_\_

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# Key Vocabulary Level 2 Standard

Picture first, then the word, then a plain-language meaning. Say each word out loud.



**12 dots**  
 $12 \div 3 = 4$

*In  $3 \div 1/4 = 12$ , the dividend is 3 — it is the total being split*

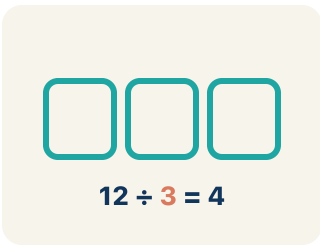
**Dividend**

**Write the definition:**

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$12 \div 3 = 4$

*In  $3 \div 1/4 = 12$ , the divisor is  $1/4$  — it is the size of each piece*

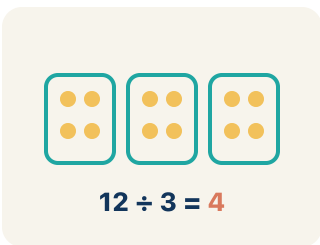
**Divisor**

**Write the definition:**

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$12 \div 3 = 4$

*In  $3 \div 1/4 = 12$ , the quotient is 12 — there are 12 quarter-size pieces in 3*

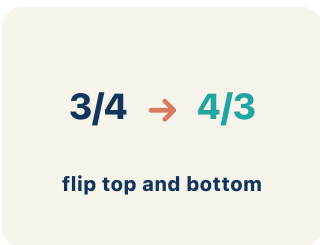
**Quotient**

**Write the definition:**

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$3/4 \rightarrow 4/3$   
flip top and bottom

*The reciprocal of  $1/4$  is  $4/1 = 4$ . Multiplying by the reciprocal gives the same result as dividing.*

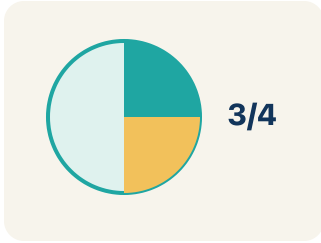
**Reciprocal**

**Write the definition:**

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*1/2, 1/3, 1/4, 1/5 – each represents one equal part  
of a whole*

**Unit fraction**

**Write the definition:**

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## Guided Notes Level 2 Standard



### WHAT WE'RE LEARNING TODAY

**I can use models to interpret what it means to divide by a fraction.**



**Fill in each blank as we go. Use the Word Bank to help you.**



### WORD BANK – FILL EACH BLANK WITH THE BEST WORD

Dividend

Divisor

Quotient

Reciprocal

Unit fraction



Tap any word to see what it means and a picture.

1 In  $6 \div \frac{1}{2}$ , the number 6 being divided is the .

2 In  $6 \div \frac{1}{2}$ , the number  $\frac{1}{2}$  we divide by is the .

3 The answer to a division problem is the .

4 The fraction you get by flipping the numerator and denominator is the

.

5 A fraction with a numerator of 1, like  $\frac{1}{5}$ , is a .



### Watch & Try – Worked Examples

See the notes in action: watch one worked all the way through, then try the next with the same steps.

 **I do – watch**

Follow each step as your teacher solves it.

**Problem:** What does  $3 \div \frac{1}{4}$  mean?

- A. How many  $\frac{1}{4}$ -size pieces fit into 3
- B. 3 groups of  $\frac{1}{4}$
- C. 3 minus  $\frac{1}{4}$
- D.  $\frac{1}{4}$  of 3

**Step 1**  $3 \div \frac{1}{4}$  asks: how many  $\frac{1}{4}$ -size pieces fit into 3?

**Step 2** The answer is 12, because each whole has 4 fourths, and  $3 \times 4 = 12$ .


**Answer:** A. How many  $\frac{1}{4}$ -size pieces fit into 3

 **Try – put the steps in order**

Drag the cards (or use the  $\blacktriangle$   $\blacktriangledown$  buttons) to put the solution steps in the right order, then press **Check**.

The answer is 12, because each whole has 4 fourths, and  $3 \times 4 = 12$ .

$3 \div \frac{1}{4}$  asks: how many  $\frac{1}{4}$ -size pieces fit into 3?

 **We do – together**

Solve this one with your class using the same steps.

**Problem:** Which expression means 'how many  $\frac{1}{3}$ -size pieces are in 2'?

- A.  $2 \div \frac{1}{3}$
- B.  $2 \times \frac{1}{3}$
- C.  $\frac{1}{3} \div 2$
- D.  $2 + \frac{1}{3}$

**Step 1** \_\_\_\_\_

**Step 2** \_\_\_\_\_

**Answer:** \_\_\_\_\_

 **You do — your turn**

Now try one on your own. Show every step.

**Problem:** A rope is 4 feet long. How many  $\frac{1}{2}$ -foot pieces can be cut from it?

- A. 8 pieces
- B. 2 pieces
- C. 4 pieces
- D.  $\frac{1}{2}$  piece

Show your work:

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## Try It

Solve on your own. Check the answer key when you are done.

**1. Agent Cole has 8 feet of evidence rope and cuts it into  $\frac{1}{3}$ -foot pieces for tagging. What does  $8 \div \frac{1}{3}$  mean?**

- A. How many  $\frac{1}{3}$ -foot pieces fit into 8 feet
- B.  $\frac{1}{3}$  of the 8 feet of rope
- C. 8 feet shortened by  $\frac{1}{3}$  of a foot
- D. 8 pieces that are each  $\frac{1}{3}$  foot long

Show your work:

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**2. Picture clue: a 5-inch fingerprint strip is split into  $\frac{1}{6}$ -inch slivers under the microscope. Which division does the picture show, and what is the count?**

- A.  $5 \div \frac{1}{6} = 30$  slivers
- B.  $5 \div 6 = \frac{5}{6}$  of a sliver
- C.  $\frac{1}{6} \div 5 = \frac{1}{30}$  sliver
- D.  $5 \times \frac{1}{6} = \frac{5}{6}$  of an inch

Show your work:

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## Stretch Your Thinking

Level 2 enrichment

Challenge task — explain your reasoning in full sentences.

**Dividing 6 by  $\frac{1}{2}$  gives 12, but dividing 6 by 2 gives 3. How can dividing by a smaller number ( $\frac{1}{2}$ ) give a bigger answer than dividing by a larger number (2)? Explain using a real-world example.**

*Sentence starter: When I divide 6 by 2, I am \_\_\_\_\_. When I divide 6 by  $\frac{1}{2}$ , I am \_\_\_\_\_. The answer is bigger because \_\_\_\_\_.*

Show your work:

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## Reflect — Exit Ticket

**What does  $5 \div \frac{1}{4}$  mean, and what is the quotient?**

- A. How many  $\frac{1}{4}$ -size pieces fit into 5; quotient is 20
- B. 5 groups of  $\frac{1}{4}$ ; quotient is  $\frac{5}{4}$
- C.  $\frac{1}{4}$  of 5; quotient is  $\frac{5}{4}$
- D. 5 minus  $\frac{1}{4}$ ; quotient is  $4 \frac{3}{4}$

Your answer:

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