



Teacher Notes

I created this resource to provide you with a resource that could be used for guided math or reteach groups. Division with fractions can be tough! Many of us merely learned the procedural approach of “flip and multiply” to divide fractions when we were in school.

Both Common Core standards and the TEKS specify that we need to teach our students how to model division of fractions. We need to start with unit fractions to build a foundation full of meaning for students. You will find pages that teach several types of models (fraction circles, number lines and strip diagrams/fraction bars) to help build students’ conceptual understanding. Every page also allows for a place to work through the procedural solution (flip and multiply) with students.

Every page starts with a word problem to help students build understanding in a real-world context and to visualize what is actually happening. The problem solving pages toward the end have guiding questions to help students break down each problem, identify the parts and determine the correct equation to solve. The goal is for students to internalize these questions and to run through the questions automatically in their heads when they are stuck on other problems. These are the same questions I ask students for multiplication problems. When we have equal groups and we are looking for the total, we multiply, but if we know the total then we will divide.

There are so many ways you can use this resource. If you want to use the pages for guided math, you will find the following page helpful in planning your stations.

I hope you and your students have fun, meaningful learning experiences with this resource! If you have any questions, comments or resources you would like to see in the future, email me: Melissa@marvelmath.com

Thanks,
Melissa


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Fraction Division



CCSS ★ 5.NF.B.7
TEKS ★ 5.3J & 5.3L

How to use this resource for Guided Math:

Fraction Division Using Question Cards

Name: _____

5 ÷ 1/3
I have ☐ donuts. I will cut each one into pieces that are equal to ☐ of a whole donut.
Visualize
Model
Solve The answer to the problem is the answer to this question: How many pieces are there?
Answer: _____

1/3 ÷ 5
I have ☐ of a donut. I will cut what I have into ☐ pieces.
Visualize
Model
Solve The answer to the problem is the answer to this question: What size is each piece?
Answer: _____

3 ÷ 1/4
I have ☐ of a whole. I will cut each one into pieces that are equal to ☐ of a whole.
Visualize
Model
Solve The answer to the problem is the answer to this question: How many jumps to get to zero?
Answer: _____

1/4 ÷ 3
I have ☐ of a whole. I will cut what I have into ☐ pieces.
Visualize
Model
Solve The answer to the problem is the answer to this question: What is the size of each jump to get to zero?
Answer: _____

4 ÷ 1/2
I have ☐ sub sandwiches. I will cut each one into pieces that are equal to ☐ of a whole sub sandwich.
Visualize
Model
Solve The answer to the problem is the answer to this question: How many pieces are there?
Answer: _____

1/2 ÷ 4
I have ☐ of a sub sandwich. I will cut what I have into ☐ pieces.
Visualize
Model
Solve The answer to the problem is the answer to this question: What size is each piece?
Answer: _____

5 ÷ 1/3
I have ☐ of a whole. I will cut each one into pieces that are equal to ☐ of a whole.
Visualize
Model
Solve The answer to the problem is the answer to this question: How many jumps to get to zero?
Answer: _____

1/3 ÷ 5
I have ☐ of a whole. I will cut what I have into ☐ pieces.
Visualize
Model
Solve The answer to the problem is the answer to this question: What is the size of each jump to get to zero?
Answer: _____

7 ÷ 1/2
I am running a race. The race is separated into ☐ mile sections. How many sections?
Visualize
Model
Solve The answer to the problem is the answer to this question: How many jumps to get to zero?
Answer: _____

1/2 ÷ 7
I am running a race. The race is separated into ☐ mile sections. How long is each section?
Visualize
Model
Solve The answer to the problem is the answer to this question: What is the size of each jump to get to zero?
Answer: _____

6 ÷ 1/3
I am running a race. The race is separated into ☐ mile sections. How many sections?
Visualize
Model
Solve The answer to the problem is the answer to this question: How many jumps to get to zero?
Answer: _____

1/3 ÷ 6
I am running a race. The race is separated into ☐ mile sections. How long is each section?
Visualize
Model
Solve The answer to the problem is the answer to this question: What is the size of each jump to get to zero?
Answer: _____

Fraction Division Problem Solving

Name: _____

DO I MULTIPLY OR DIVIDE? Which numbers go where? If I know the _____, I can _____ to find the part I do not know.

Here are two types of division equations:

÷ = ÷ =

Total Number of groups Number in each group Total Number in each group Number of groups

1. The land practiced their half-time routine for a total of 1/2 hours on Saturday. Their half-time routine is 1/4 of an hour. If there were no breaks, how many times did they practice their routine on Saturday?
What is being grouped?
How many groups?
How many in each group?
What is the total?
What equation can you use to solve the problem?
Answer: _____

2. Ethan and his 3 friends will take equal turns playing a video game on the computer. They have a total of 1/2 hour to play. What fraction of an hour will each person get to play the video game?
What is being grouped?
How many groups?
How many in each group?
What is the total?
What equation can you use to solve the problem?
Answer: _____

Teacher Table

Each page is designed to be the perfect length for a small group lesson! Pages you don't use here are great to use as additional independent practice, review later in the year, or HW.

Small Group Date: _____

Student needs reteach for: _____

Student Names: _____ Making a Model: _____ Setting up equation: _____ Dividing: _____

DIVISION WITH UNIT FRACTIONS #1
CCSS 5.NF.B.7 & 5.NF.B.7C TEKS 5.3J & 5.3L
Macy bought a 5 cup container of ice cream. She used the entire container to make ice cream sandwiches. Each ice cream sandwich used 1/3 of a cup of ice cream. How many ice cream sandwiches did she make?
Models will vary, 2 types are shown below.

Draw a Model

Equation & Solution $5 \div \frac{1}{3} = 15$ She made 15 ice cream sandwiches

DIVISION WITH UNIT FRACTIONS #2
CCSS 5.NF.B.7 & 5.NF.B.7C TEKS 5.3J & 5.3L
A pastry chef has 1/3 cup of chocolate sauce to drizzle over 6 strawberries. She will use the same amount for each strawberry. How much chocolate sauce will be drizzled on each strawberry? (give your answer in cups)

Draw a Model

Equation & Solution $\frac{1}{3} \div 6 = \frac{1}{18}$ 1/18 cup of chocolate sauce will be drizzled on each strawberry.

Small Group Date: _____

Student needs reteach for: _____

Student Names: _____ Making a Model: _____ Setting up equation: _____ Dividing: _____

Exit Slips

4 exit slips and a key with a built-in data tracker help you monitor student progress. This easy system will help you effortlessly plan your reteach small groups.

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Purpose: Gives students an opportunity to think deeply and gives teachers a clear picture of student understanding

Purpose:
Gives students
much needed
practice in a fun,
engaging format
& allows for
partner work

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5.NF.1
TEKS 5.1
5.1

Purpose:
Further develops
student
conceptual
understanding
of math
content

Purpose:
Gives students
time to practice
content on their
own

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5.NF.B.7
TEKS 5.3J
5.3L

Fraction Division

Using Fraction Circles

Name _____

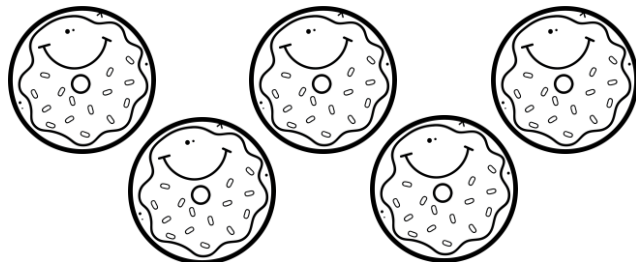
5.NF.B.7
5.3J
5.3L

$$5 \div \frac{1}{3}$$

Visualize

I have donuts. I will cut each one into pieces that are equal to of a whole donut.

Model



Solve

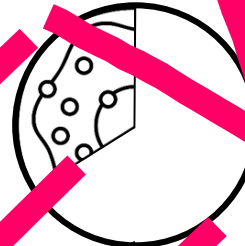
The answer to the problem is the answer to this question:
How many pieces are there?

$$\frac{1}{3} \div 5$$

Visualize

I have of a donut. I will cut what I have into pieces.

Model



Solve

The answer to the problem is the answer to this question:
What size is each piece?

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

Visualize

I have . I will cut each one into pieces that are equal to of a whole.

Model

Your turn to pick.
What will you visualize?

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

Visualize

I have of a _____. I will cut what I have into pieces.

Model

Solve

Fraction Division

Using Fraction Circles

KEY

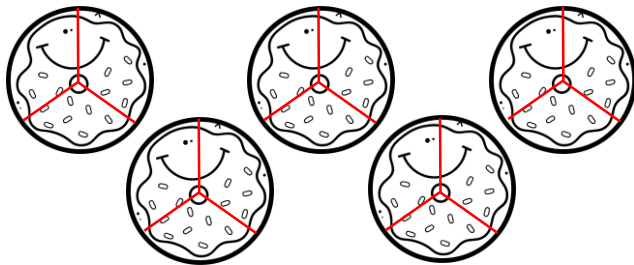
5.NF.B.7
5.3J
5.3L

$$5 \div \frac{1}{3}$$

Visualize

I have **5** donuts. I will cut each one into pieces that are equal to $\frac{1}{3}$ of a whole donut.

Model



Solve

The answer to the problem is the answer to this question:

How many pieces are there? 15

Procedural Solution:

$$5 \div \frac{1}{3} = \frac{5}{1} \div \frac{1}{3} \quad \frac{5}{1} \times \frac{3}{1} = \frac{15}{1}$$

Students can complete the blanks with any thing that can be modeled.

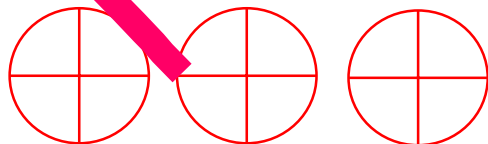
$$3 \div \frac{1}{4}$$

Your turn to pick.
What will you visualize?

Visualize

I have **3** _____. I will cut each one into pieces that are equal to $\frac{1}{4}$ of a whole _____.

Model



Solve

How many pieces are there? **12**

Procedural Solution:

$$3 \div \frac{1}{4} = \frac{3}{1} \div \frac{1}{4} \quad \frac{3}{1} \times \frac{4}{1} = \frac{12}{1}$$

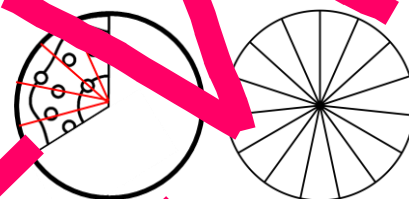
$$\frac{1}{3} \div 5$$

Visualize

I have $\frac{1}{3}$ of a donut. I will cut what I have into **5** pieces.

Model

Make sure students see that the whole would be cut into 15 pieces.



Solve

The answer to the problem is the answer to this question:

What size is each piece? $\frac{1}{15}$

Procedural Solution:

$$\frac{1}{3} \div 5 = \frac{1}{3} \div \frac{5}{1} \quad \frac{1}{3} \times \frac{1}{5} = \frac{1}{15}$$

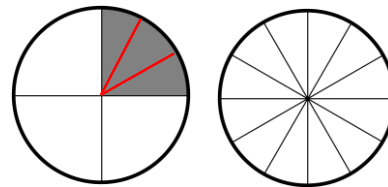
$$\frac{1}{4} \div 3$$

Visualize

I have $\frac{1}{4}$ of a _____. I will cut what I have into **3** pieces.

Model

Make sure students see that the whole would be cut into 12 pieces.



Solve

What size is each piece? $\frac{1}{12}$

Procedural Solution:

$$\frac{1}{4} \div 3 = \frac{1}{4} \div \frac{3}{1} \quad \frac{1}{4} \times \frac{1}{3} = \frac{1}{12}$$