



# Tier 3

## Intervention Lessons

5.NF.7b

**Learning Target:** I will divide a whole number by a unit fraction

**Readiness for 6.NS.1:** Multiply and divide fractions

# Table of Contents

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Planning Guide .....	p. 3
Sessions 1 through 8: Lesson Resources .....	p. 4-57
Independent Practice Activities: “Division Match-up!” .....	p. 58-65
Classroom Poster: Questions for Solving Word Problems .....	p. 66
Tier 1 Support Classroom Poster: Steps for Solving Word Problems .....	p. 67



# Tier 3 Intervention Planning Guide

**Learning Target:** I will divide a whole number by a unit fraction

**Readiness** for multiplying and dividing fractions

<b>Recommended Actions</b>	
<b>Beginning</b> (5 min.)	<ul style="list-style-type: none"> <li>➤ Review the learning target with the whole group</li> <li>➤ Ask each student to set a goal for the day based on their previous Quick Check Score</li> <li>➤ Have each student use a highlighter to plot their goal for the day</li> </ul>
<b>Middle</b> (15 min.)	<ul style="list-style-type: none"> <li>➤ Model solving a word problem – “I do” (<i>Sessions 1, 3 and 6 only</i>)</li> <li>➤ Guided Practice – “We do”</li> </ul> <p><b>Sessions 1 and 2:</b> Fold fraction squares to divide a whole number by a unit fraction</p> <p><b>Sessions 3, 4 and 5:</b> Draw on fraction squares to divide a whole number by a unit fraction</p> <p><b>Sessions 6, 7 and 8:</b> Use multiplication to divide a unit fraction by a whole number</p>
<b>End</b> (10 min.)	<ul style="list-style-type: none"> <li>➤ Bring the students back together.</li> <li>➤ Ask students to reflect on their progress towards the learning target               <ul style="list-style-type: none"> <li>○ What did I learn today about dividing a whole number by a unit fraction?</li> <li>○ How confident do you feel about dividing a whole number by a unit fraction on my own? (Thumbs up, down, or sideways)</li> </ul> </li> <li>➤ Assess each student’s progress using the next <b>Quick Check</b> form</li> <li>➤ Guide students to self-correct their <b>Quick Check</b></li> <li>➤ Guide students to chart their progress in their <b>Growth Chart</b> <ul style="list-style-type: none"> <li>○ If not using Delta Math lessons, record the activity in the table</li> </ul> </li> <li>➤ Collect each student’s <b>Quick Check</b> and <b>Growth Chart</b></li> </ul>
<b>After Session 6</b>	<ul style="list-style-type: none"> <li>➤ Differentiation Options:               <ul style="list-style-type: none"> <li>○ Allow students who met the learning goal to work independently while others do the guided practice during the next session</li> <li>○ Exit students who met the learning goal for a third time</li> </ul> </li> <li>➤ Problem solve with a team to plan additional support for students who do not meet the learning goal within 8 sessions</li> </ul>



# Session 1: Modeling (I Do)

**Learning Target:** I will divide a whole number by a unit fraction

**Readiness** for multiplying and dividing fractions

Zach has 2 pounds of ground beef and is planning to make hamburgers. If he wants to make each hamburger equal to  $\frac{1}{3}$  of a pound, how many hamburgers can he make?

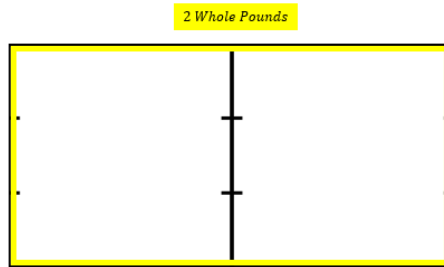
# Session 1: Modeling (I Do – Visual Support)

**Learning Target:** I will divide a whole number by a unit fraction

**Readiness** for multiplying and dividing fractions

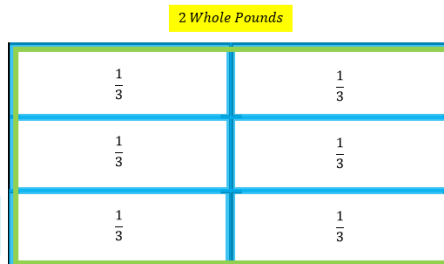
Zach has 2 pounds of ground beef and is planning to make hamburgers. If he wants to make each hamburger equal to  $\frac{1}{3}$  of a pound, how many hamburgers can he make?

**Outline 2 wholes**



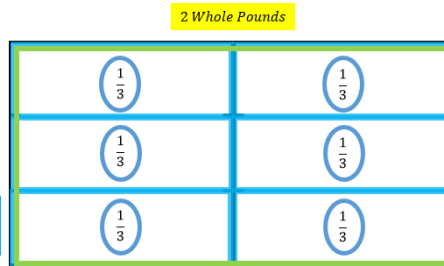
$$2 \div \frac{1}{3}$$

**Outline parts of 1 third**



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

**Find how many parts that make 2 wholes**



$$2 \div \frac{1}{3} = 6$$

# Session 1: Modeling (I Do - Teacher Notes)

**Learning Target:** I will divide a whole number by a unit fraction

**Readiness** for multiplying and dividing fractions

Zach has 2 pounds of ground beef and is planning to make hamburgers. If he wants to make each hamburger equal to  $\frac{1}{3}$  of a pound, how many hamburgers can he make?

**I am going to think aloud to model solving this problem.**

**Your job is to watch, listen, think and ask questions.**

**First, it is important to know what the problem is about.**

**This problem is about Zach making hamburgers.**

**Second, I need to determine what I need to find.**

**I need to find how many hamburgers Zach can make.**

**Third, I need to determine what I know.**

**I know that he has 2 pounds of ground beef and plans to make each hamburger equal to  $\frac{1}{3}$  of a pound.**

**Fourth, I need to figure out what I can try.**

**I am going to try modelling this situation using square pieces of paper.**

(Hold up 2 squares connected together from the 2<sup>nd</sup> set of squares on [page 10](#), write 2 whole pounds on the Modeling page and outline the 2 squares with yellow highlighter.)

**I will begin by folding each square into thirds to represent each hamburger.**

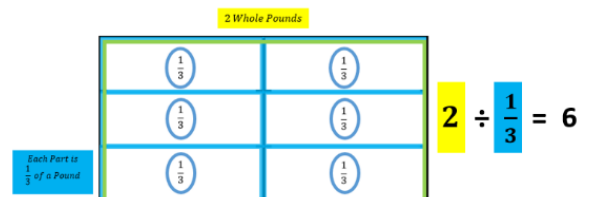
(Fold the squares into thirds...outline and label each third using a blue highlighter.)

**Each section represents 1 of the hamburgers...we need to find how many make up 2 wholes.**

(Circle each label.)

**I see that 2 whole pounds are made of 6 equal parts of 1 third.**

(Count the 6 sections.)



**Last, I need to make sure that my answer makes sense.**

**I found that Zach could make 6 hamburgers. It makes sense because I represented the 2 pounds of ground beef with 2 paper squares and folded them into equal parts of 1 third to find how many can be made from 2 pounds.**




# Whole Numbers to Divide (Set 1)

**Directions:** Provide each student both sets of squares for the Guided Practice.

**Note:** The teacher may use the two squares in the 1<sup>st</sup> row for the Modeling problem.

**(We Do Together, problems 1-4)**


			Use these two for Problem 1
			Use these three for Problem 2
			Use these four for Problem 3
			Use these three for Problem 4



# Whole Numbers to Divide (Set 2)

(You Do Together, problems 5-8)

	Use these two for Problem 5		
		Use these three for Problem 6	
			Use these four for Problem 7
			Use these four for Problem 8





**Learning Target:** I will divide a whole number by a unit fraction

## Session 1: Guided Practice (We Do)

**Materials:**

- Templates for Squares (2 sheets per student)
- 1 yellow and 1 blue highlighter per student

**We Do Together:** (Teacher Actions)

- Restate each division problem based on your conceptual understanding.
- Fold and highlight fraction squares to find each answer.

<p>1.</p> $2 \div \frac{1}{4}$	<p>2.</p> $3 \div \frac{1}{3}$
<p>3.</p> $4 \div \frac{1}{2}$	<p>4.</p> $3 \div \frac{1}{4}$

**You Do Together:** (As a class, or in small groups)

- Students take turns leading to divide whole numbers by unit fractions.

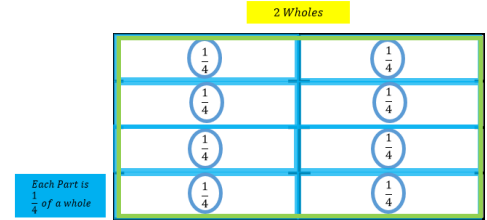
<p>5.</p> $2 \div \frac{1}{3}$	<p>6.</p> $3 \div \frac{1}{2}$
<p>7.</p> $4 \div \frac{1}{4}$	<p>8.</p> $4 \div \frac{1}{3}$

**Learning Target:** I will divide a whole number by a unit fraction

## Session 1: Guided Practice (We Do – Teacher Notes)

**Materials:**

- Templates for Squares (2 sheets per student)
- 1 yellow and 1 blue highlighter per student



**We Do Together:** (Teacher Actions)

- Restate each division problem based on your conceptual understanding.
- Fold and highlight fraction squares to find each answer.

<p>1.</p> $2 \div \frac{1}{4} = 8$ <p style="text-align: center; color: red;"><i>2 divided into groups of 1 fourth</i></p>	<p>2.</p> $3 \div \frac{1}{3} = 9$ <p style="text-align: center; color: red;"><i>3 divided into groups of 1 third</i></p>
<p>3.</p> $4 \div \frac{1}{2} = 8$ <p style="text-align: center; color: red;"><i>4 divided into groups of 1 half</i></p>	<p>4.</p> $3 \div \frac{1}{4} = 12$ <p style="text-align: center; color: red;"><i>3 divided into groups of 1 fourth</i></p>

**You Do Together:** (As a class, or in small groups)

- Students take turns leading to divide whole numbers by unit fractions.

<p>5.</p> $2 \div \frac{1}{3} = 6$ <p style="text-align: center; color: red;"><i>2 divided into groups of 1 third</i></p>	<p>6.</p> $3 \div \frac{1}{2} = 6$ <p style="text-align: center; color: red;"><i>3 divided into groups of 1 half</i></p>
<p>7.</p> $4 \div \frac{1}{4} = 16$ <p style="text-align: center; color: red;"><i>4 divided into groups of 1 fourth</i></p>	<p>8.</p> $4 \div \frac{1}{3} = 12$ <p style="text-align: center; color: red;"><i>4 divided into groups of 1 third</i></p>



# Session 1: Self-Reflection

**Learning Target:** I will divide a whole number by a unit fraction

Briefly discuss student responses:

- What did I learn today about dividing a whole number by a unit fraction?
  
- How confident do I feel about dividing a whole number by a unit fraction on my own?  
*(Thumbs up, down, or sideways)*



# Quick Check - Form A

Name \_\_\_\_\_ Date \_\_\_\_\_

**Learning Target:** I will divide a whole number by a unit fraction.

**Directions:** Write the answer to each problem. (Work time: 4 minutes)

**1.**

$$2 \div \frac{1}{3} = \underline{\hspace{2cm}}$$

**2.**

$$3 \div \frac{1}{4} = \underline{\hspace{2cm}}$$

**3.**

$$6 \div \frac{1}{4} = \underline{\hspace{2cm}}$$

**4.**

$$5 \div \frac{1}{9} = \underline{\hspace{2cm}}$$

**5.**

$$9 \div \frac{1}{3} = \underline{\hspace{2cm}}$$

**6.**

$$2 \div \frac{1}{4} = \underline{\hspace{2cm}}$$

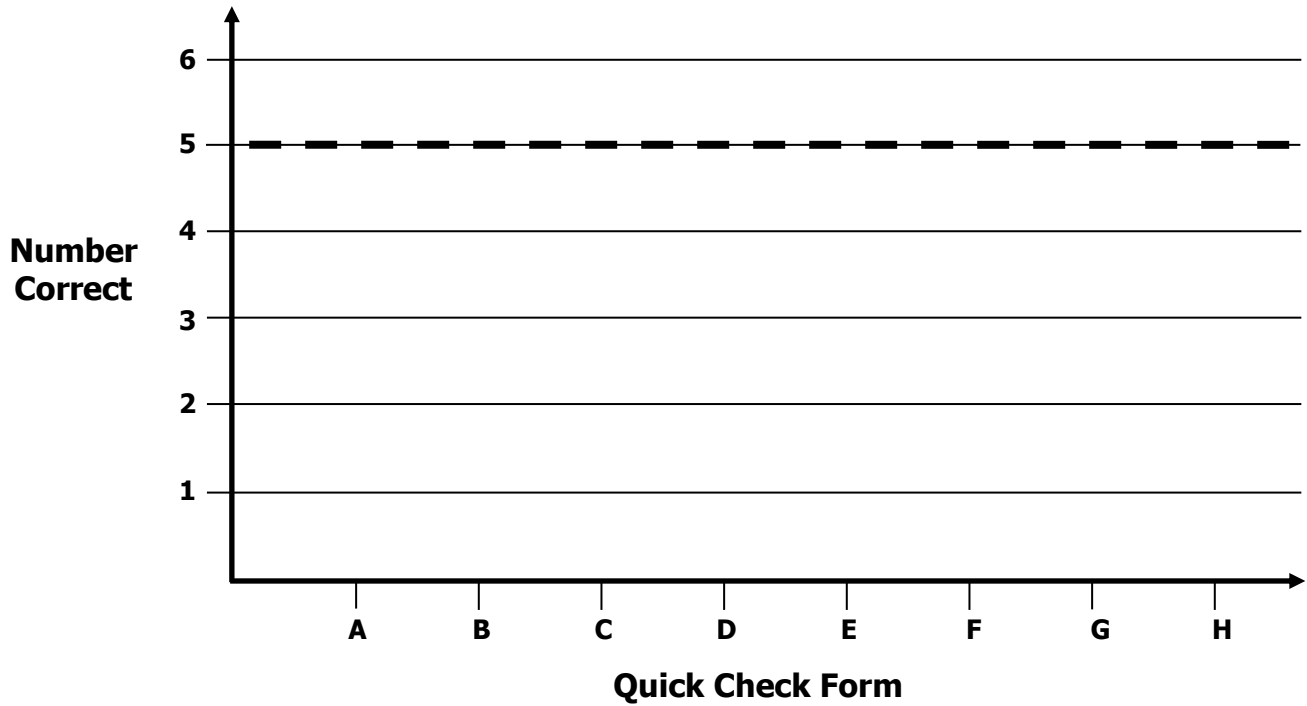


# Growth Chart

Name \_\_\_\_\_ Date \_\_\_\_\_

**Learning Target:** I will divide a whole number by a unit fraction.

**Goal:** 5 out of 6 correct



Intervention	Date	Score
Session 1:		
Session 2:		
Session 3:		
Session 4:		
Session 5:		
Session 6:		
Session 7:		
Session 8:		



Name \_\_\_\_\_

Date \_\_\_\_\_

**Learning Target:** I will divide a whole number by a unit fraction

## Session 2: Guided Practice (We Do)

**Materials:**

- Templates for Squares (2 sheets per student)
- 1 yellow and 1 blue highlighter per student

**We Do Together:** (Teacher Actions)

- Restate each division problem based on your conceptual understanding.
- Fold and highlight fraction squares to find each answer.

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

**You Do Together:** (As a class, or in small groups)

- Students take turns leading to divide whole numbers by unit fractions.

5. $2 \div \frac{1}{3}$	6. $3 \div \frac{1}{2}$
7. $4 \div \frac{1}{4}$	8. $4 \div \frac{1}{3}$




# Whole Numbers to Divide (Set 1)

**Directions:** Provide each student both sets of squares for the Guided Practice.

**(You Do Together, problems 1-4)**


	Use these two for Problem 1		
		Use these three for Problem 2	
			Use these four for Problem 3
			Use these four for Problem 4



# Whole Numbers to Divide (Set 2)

(We Do Together, problems 5-8)

				Use these two for Problem 5
				Use these three for Problem 6
				Use these four for Problem 7
				Use these three for Problem 8







## Session 2: Self-Reflection

**Learning Target:** I will divide a whole number by a unit fraction

Briefly discuss student responses:

- What did I learn today about dividing a whole number by a unit fraction?
  
- How confident do I feel about dividing a whole number by a unit fraction on my own?  
*(Thumbs up, down, or sideways)*



# Quick Check - Form B

Name \_\_\_\_\_ Date \_\_\_\_\_

**Learning Target:** I will divide a whole number by a unit fraction.

**Directions:** Write the answer to each problem. (Work time: 4 minutes)

**1.**

$$4 \div \frac{1}{5} = \underline{\hspace{2cm}}$$

**2.**

$$2 \div \frac{1}{8} = \underline{\hspace{2cm}}$$

**3.**

$$5 \div \frac{1}{3} = \underline{\hspace{2cm}}$$

**4.**

$$8 \div \frac{1}{8} = \underline{\hspace{2cm}}$$

**5.**

$$9 \div \frac{1}{7} = \underline{\hspace{2cm}}$$

**6.**

$$3 \div \frac{1}{6} = \underline{\hspace{2cm}}$$



## Session 3: Modeling (I Do)

**Learning Target:** I will divide a whole number by a unit fraction

**Readiness** for multiplying and dividing fractions

Zach loves to eat jellybeans, but yesterday he ate 2 cups of jellybeans and felt sick. If he ate the  $\frac{1}{4}$  of a cup each time he walked by the jellybean jar, how many times did he eat jellybeans?

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# Session 3: Modeling (I Do – Visual Support)

**Learning Target:** I will divide a whole number by a unit fraction

**Readiness** for multiplying and dividing fractions

Zach loves to eat jellybeans, but yesterday he ate 2 cups of jellybeans and felt sick. If he ate the  $\frac{1}{4}$  of a cup each time he walked by the jellybean jar, how many times did he eat jellybeans?

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

2 Cups of Jellybeans

Each part is  $\frac{1}{4}$  of a whole

✓	✓
✓	✓
✓	✓
$\frac{1}{4}$ ✓	✓

# Session 3: Modeling (I Do - Teacher Notes)

**Learning Target:** I will divide a whole number by a unit fraction

**Readiness** for multiplying and dividing fractions

Zach loves to eat jellybeans, but yesterday he ate 2 cups of jellybeans and felt sick. If he ate the  $\frac{1}{4}$  of a cup each time he walked by the jellybean jar, how many times did he eat jellybeans?

**I am going to think aloud to model solving this problem.**

**Your job is to watch, listen, think and ask questions.**

**First, it is important to know what the problem is about.**

This problem is about Zach eating jellybeans.

**Second, I need to determine what I need to find.**

I need to find how many times he ate jellybeans.

**Third, I need to determine what I know.**

I know that he ate 2 cups of jellybeans and he ate  $\frac{1}{4}$  of a cup each time he walked by the jellybean jar.

**Fourth, I need to figure out what I can try.**

I am going to try using an area drawing to find how many  $\frac{1}{4}$  cups are in 2 cups.

(Write the division problem above the 2 squares and outline them using a yellow highlighter.)

**I will begin by separating each whole cup into the 1-quarter cup servings.**

(Use the guide for drawing fractions to draw lines separating each cup into quarters, label them and outline each quarter with a blue highlighter.)

**To see how many times he ate jellybeans, I will count the total number of 1-quarter servings.**

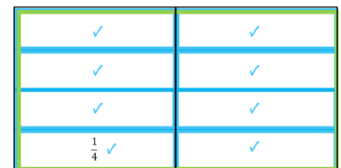
(Point to and count each serving.)

There are 8 1-quarter cup servings in 2 cups of jellybeans.

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

2 Cups of Jellybeans

Each part is  $\frac{1}{4}$  of a whole



**Last, I need to make sure that my answer makes sense.**

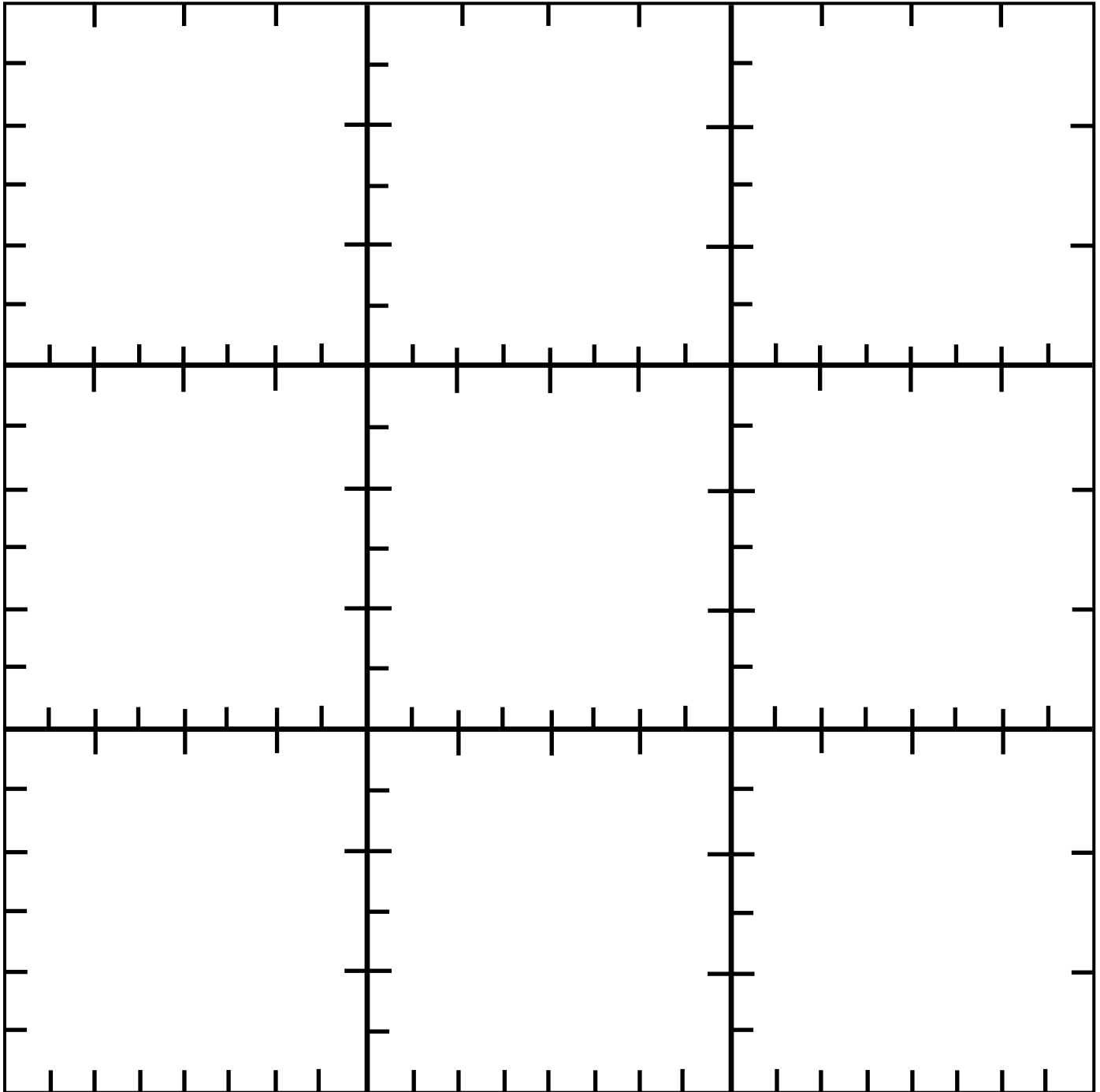
I found that Zach ate jellybeans 8 times. It makes sense because I represented the 2 cups using squares and separated each cup into 1 quarter equal parts to find how many of these parts equal 2 wholes.



# Guides for Drawing Fractions

**Directions:** Copy on cardstock and cut out 1 square per student.

**Note:** The sides of each square provide a guide to draw halves, thirds, fourths, sixths and eighths.  
Rotate the square to use the side required for each problem.





Name \_\_\_\_\_

Date \_\_\_\_\_

**Learning Target:** I will divide a whole number by a unit fraction

## Session 3: Guided Practice (We Do)

**We Do Together:** (Teacher Actions)

- Restate each division problem based on your conceptual understanding.  
*Example: 3 wholes equally divided into groups of 1-eighth*
- Use the square guide to help you draw each problem.

1.  $3 \div \frac{1}{8} =$  \_\_\_\_\_

--	--	--

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

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Name \_\_\_\_\_ Date \_\_\_\_\_

**Learning Target:** I will divide a whole number by a unit fraction

## Session 3: Guided Practice (We Do – Continued)

**We Do Together:** (Continued)

3.  $2 \div \frac{1}{8} =$  \_\_\_\_\_

--	--

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

--	--	--





Name \_\_\_\_\_ Date \_\_\_\_\_

**Learning Target:** I will divide a whole number by a unit fraction

## Session 3: Guided Practice (We Do – Continued)

**You Do Together:** (Student Actions)

- Restate each division problem based on your conceptual understanding.  
*Example: 3 wholes equally divided into groups of 1-fourth*
- Use the square guide to help you draw each problem.

5.  $3 \div \frac{1}{4} =$  \_\_\_\_\_

--	--	--

6.  $2 \div \frac{1}{3} =$  \_\_\_\_\_

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Name \_\_\_\_\_ Date \_\_\_\_\_

**Learning Target:** I will divide a whole number by a unit fraction

## Session 3: Guided Practice (We Do – Continued)

**You Do Together:** (Continued)

7.  $3 \div \frac{1}{6} =$  \_\_\_\_\_

--	--	--

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

--	--

**Learning Target:** I will divide a whole number by a unit fraction

## Session 3: Guided Practice (We Do – Teacher Notes)

**We Do Together:** (Teacher Actions)

- Restate each division problem based on your conceptual understanding.  
*Example: How many groups of 1 eighth make up 3 wholes?*
- Use the square guide to help you draw each problem.

*3 divided into groups of 1 eighth*

1.  $3 \div \frac{1}{8} = \underline{24}$

✓	✓	✓
✓	✓	✓
✓	✓	✓
✓	✓	✓
✓	✓	✓
✓	✓	✓
✓	✓	✓
✓	✓	✓
$\frac{1}{8}$ ✓	✓	✓

*2 divided into groups of 1 sixth*

2.  $2 \div \frac{1}{6} = \underline{12}$

✓	✓
✓	✓
✓	✓
✓	✓
✓	✓
$\frac{1}{6}$ ✓	✓



## Session 3: Self-Reflection

**Learning Target:** I will divide a whole number by a unit fraction

Briefly discuss student responses:

- What did I learn today about dividing a whole number by a unit fraction?
  
- How confident do I feel about dividing a whole number by a unit fraction on my own?  
*(Thumbs up, down, or sideways)*



# Quick Check - Form C

Name \_\_\_\_\_ Date \_\_\_\_\_

**Learning Target:** I will divide a whole number by a unit fraction.

**Directions:** Write the answer to each problem. (Work time: 4 minutes)

**1.**

$$3 \div \frac{1}{4} = \underline{\hspace{2cm}}$$

**2.**

$$4 \div \frac{1}{6} = \underline{\hspace{2cm}}$$

**3.**

$$5 \div \frac{1}{8} = \underline{\hspace{2cm}}$$

**4.**

$$9 \div \frac{1}{3} = \underline{\hspace{2cm}}$$

**5.**

$$8 \div \frac{1}{10} = \underline{\hspace{2cm}}$$

**6.**

$$3 \div \frac{1}{6} = \underline{\hspace{2cm}}$$



Name \_\_\_\_\_

Date \_\_\_\_\_

**Learning Target:** I will divide a whole number by a unit fraction

## Session 4: Guided Practice (We Do)

**We Do Together:** (Teacher Actions)

- Restate each division problem based on your conceptual understanding.  
*Example: 3 wholes equally divided into groups of 1-sixth*
- Use the square guide to help you draw each problem.

1.  $3 \div \frac{1}{6} =$  \_\_\_\_\_

--	--	--

2.  $2 \div \frac{1}{4} =$  \_\_\_\_\_

--	--



Name \_\_\_\_\_ Date \_\_\_\_\_

**Learning Target:** I will divide a whole number by a unit fraction

## Session 4: Guided Practice (We Do – Continued)

**We Do Together:** (Continued)

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

--	--

4.  $3 \div \frac{1}{8} =$  \_\_\_\_\_

--	--	--



Name \_\_\_\_\_ Date \_\_\_\_\_

**Learning Target:** I will divide a whole number by a unit fraction

## Session 4: Guided Practice (We Do – Continued)

**You Do Together:** (Student Actions)

- Restate each division problem based on your conceptual understanding.  
*Example: 3 wholes equally divided into groups of 1-half*
- Use the square guide to help you draw each problem.

5.  $3 \div \frac{1}{2} =$  \_\_\_\_\_

--	--	--

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

--	--





Name \_\_\_\_\_ Date \_\_\_\_\_

**Learning Target:** I will divide a whole number by a unit fraction

## Session 4: Guided Practice (We Do – Continued)

**You Do Together:** (Continued)

7.  $3 \div \frac{1}{4} =$  \_\_\_\_\_

--	--	--

8.  $2 \div \frac{1}{8} =$  \_\_\_\_\_

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## Session 4: Self-Reflection

**Learning Target:** I will divide a whole number by a unit fraction

Briefly discuss student responses:

- What did I learn today about dividing a whole number by a unit fraction?
  
- How confident do I feel about dividing a whole number by a unit fraction on my own?  
*(Thumbs up, down, or sideways)*



# Quick Check - Form D

Name \_\_\_\_\_ Date \_\_\_\_\_

**Learning Target:** I will divide a whole number by a unit fraction.

**Directions:** Write the answer to each problem. (Work time: 4 minutes)

**1.**

$$2 \div \frac{1}{5} = \underline{\hspace{2cm}}$$

**2.**

$$3 \div \frac{1}{2} = \underline{\hspace{2cm}}$$

**3.**

$$5 \div \frac{1}{6} = \underline{\hspace{2cm}}$$

**4.**

$$7 \div \frac{1}{8} = \underline{\hspace{2cm}}$$

**5.**

$$9 \div \frac{1}{6} = \underline{\hspace{2cm}}$$

**6.**

$$8 \div \frac{1}{2} = \underline{\hspace{2cm}}$$

**Learning Target:** I will divide a whole number by a unit fraction

## Session 5: Guided Practice (We Do)

**We Do Together:** (Teacher Actions)

- Restate each division problem based on your conceptual understanding.  
*Example: 3 wholes equally divided into groups of 1-eighth*
- Use the square guide to help you draw each problem.

1.  $3 \div \frac{1}{8} =$  \_\_\_\_\_

--	--	--

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

--	--



Name \_\_\_\_\_ Date \_\_\_\_\_

**Learning Target:** I will divide a whole number by a unit fraction

## Session 5: Guided Practice (We Do – Continued)

**We Do Together:** (Continued)

3.  $2 \div \frac{1}{8} =$  \_\_\_\_\_

--	--

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

--	--	--



Name \_\_\_\_\_ Date \_\_\_\_\_

**Learning Target:** I will divide a whole number by a unit fraction

## Session 5: Guided Practice (We Do – Continued)

**You Do Together:** (Student Actions)

- Restate each division problem based on your conceptual understanding.  
*Example: 3 wholes equally divided into groups of 1-fourth*
- Use the square guide to help you draw each problem.

5.  $3 \div \frac{1}{4} =$  \_\_\_\_\_

--	--	--

6.  $2 \div \frac{1}{3} =$  \_\_\_\_\_

--	--



Name \_\_\_\_\_ Date \_\_\_\_\_

**Learning Target:** I will divide a whole number by a unit fraction

## Session 5: Guided Practice (We Do – Continued)

**You Do Together:** (Continued)

7.  $3 \div \frac{1}{6} =$  \_\_\_\_\_

--	--	--

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

--	--



## Session 5: Self-Reflection

**Learning Target:** I will divide a whole number by a unit fraction

Briefly discuss student responses:

- What did I learn today about dividing a whole number by a unit fraction?
  
- How confident do I feel about dividing a whole number by a unit fraction on my own?  
*(Thumbs up, down, or sideways)*





# Quick Check - Form E

Name \_\_\_\_\_ Date \_\_\_\_\_

**Learning Target:** I will divide a whole number by a unit fraction.

**Directions:** Write the answer to each problem. (Work time: 4 minutes)

**1.**

$$2 \div \frac{1}{3} = \underline{\hspace{2cm}}$$

**2.**

$$3 \div \frac{1}{4} = \underline{\hspace{2cm}}$$

**3.**

$$6 \div \frac{1}{4} = \underline{\hspace{2cm}}$$

**4.**

$$5 \div \frac{1}{9} = \underline{\hspace{2cm}}$$

**5.**

$$9 \div \frac{1}{3} = \underline{\hspace{2cm}}$$

**6.**

$$2 \div \frac{1}{4} = \underline{\hspace{2cm}}$$

# Session 6: Modeling (I Do)

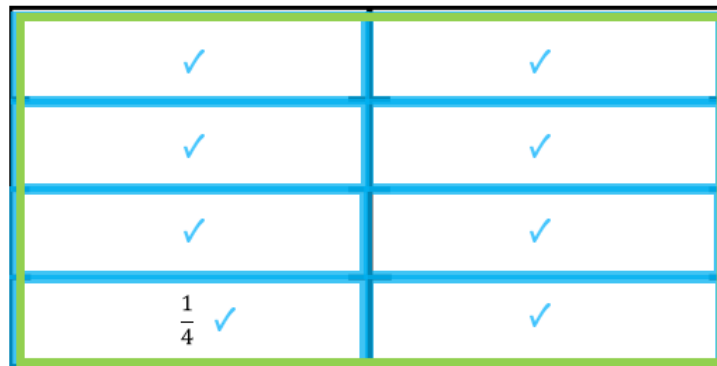
**Learning Target:** I will divide a whole number by a unit fraction

**Readiness** for multiplying and dividing fractions

Zach used an area drawing to find the answer to  $2 \div \frac{1}{4}$ . Look for structure in his drawing that would help write a multiplication problem that can be used to find the same answer.

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

2 Wholes



Each part is  $\frac{1}{4}$  of a whole

# Session 6: Modeling (I Do – Visual Support)

**Learning Target:** I will divide a whole number by a unit fraction

**Readiness** for multiplying and dividing fractions

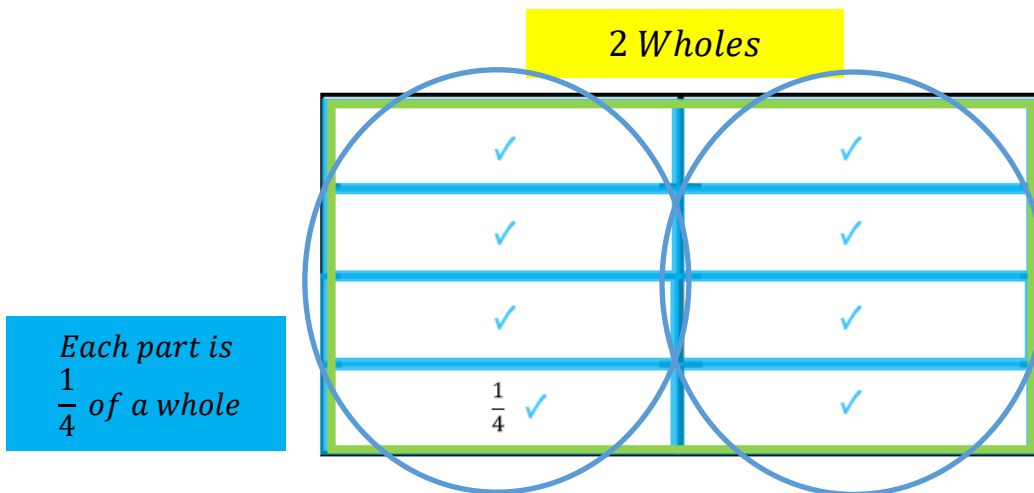
Zach used an area drawing to find the answer to  $2 \div \frac{1}{4}$ . Look for structure in his drawing that would help write a multiplication problem that can be used to find the same answer.

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

$$2 \times 4 = 8$$



*Each whole has 4 equal parts*



# Session 6: Modeling (I Do - Teacher Notes)

**Learning Target:** I will divide a whole number by a unit fraction

**Readiness** for multiplying and dividing fractions

Zach used an area drawing to find the answer to  $2 \div \frac{1}{4}$ . Look for structure in his drawing that would help write a multiplication problem that can be used to find the same answer.

**I am going to think aloud to model solving this problem.**

**Your job is to watch, listen, think and ask questions.**

**First, it is important to know what the problem is about.**

**This problem is about Zach using an area drawing to divide a whole number by a unit fraction.**

**Second, I need to determine what I need to find.**

**I need to write a multiplication problem that I can use to find the same answer.**

**Third, I need to determine what I know.**

**I know that the drawing shows 2 wholes separated into equal parts of 1 fourths and the answer is 8.**

**Fourth, I need to figure out what I can try.**

**I am going to try looking for a multiplication problem in the drawing.**

**I notice that there are 2 groups of 4 fourths.**

(Draw a circle around each whole.)

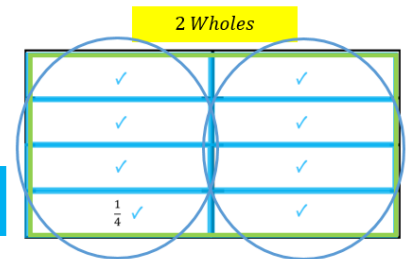
**And...2 groups of 4 can be represented by the multiplication problem  $2 \times 4 = 8$ .**

(Write " $2 \times 4 = 8$ " below the original division equation and write "Each whole has 4 equal parts" under the multiplication equation.)

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

$$2 \times 4 = 8$$

Each whole has 4 equal parts



**Can you see the multiplication problem 2 times 4 is equal to 8?**

**Last, I need to make sure that my answer makes sense.**

**I found that multiplying the whole number by the denominator of the unit fraction will result in the same answer to the division problem. It makes sense because I can see both groups of equal parts in the math drawing. Let's see if it works for all of the guided practice problems.**

**Learning Target:** I will divide a whole number by a unit fraction

## Session 6: Guided Practice (We Do)

**We Do Together:** (Teacher Actions)

- Fold your paper to hide the math drawings. Then, multiply to find the answer to each division problem.
- Unfold your paper to check if your answer is correct.

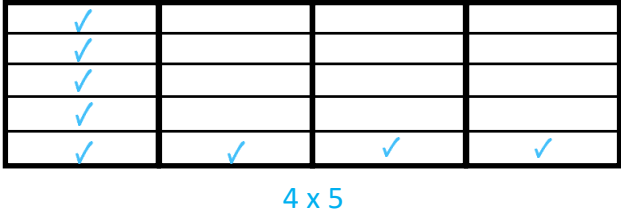
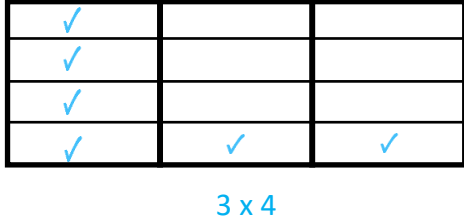
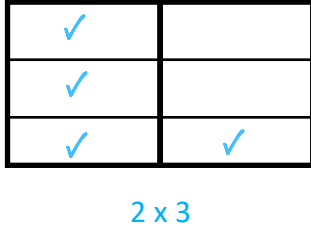
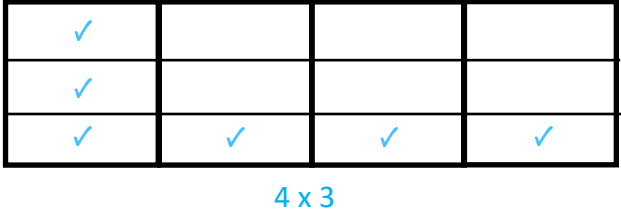
	<b>Divide Using Multiplication</b>	<b>Check Your Work</b>
<p>1.</p> $4 \div \frac{1}{4} =$		
<p>2.</p> $3 \div \frac{1}{5} =$		
<p>3.</p> $2 \div \frac{1}{3} =$		
<p>4.</p> $3 \div \frac{1}{2} =$		

**Learning Target:** I will divide a whole number by a unit fraction

## Session 6: Guided Practice (We Do - Continued)

**You Do Together:** (As a class, or in small groups)

- Students take turns leading to find the answer to each division problem, then unfold to check each answer.

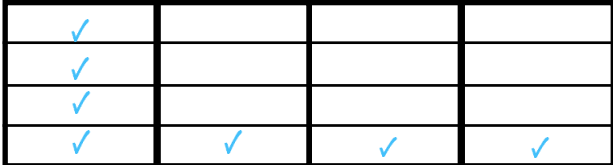
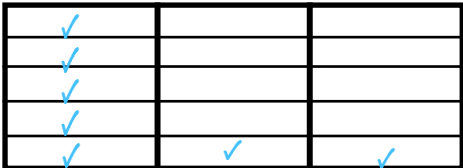
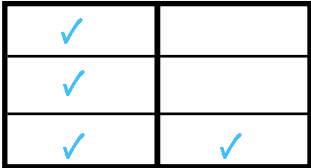

	Divide Using Multiplication	Check Your Work
5.  $4 \div \frac{1}{5} =$		
6.  $3 \div \frac{1}{4} =$		
7.  $2 \div \frac{1}{3} =$		
8.  $4 \div \frac{1}{3} =$		

**Learning Target:** I will divide a whole number by a unit fraction

## Session 6: Guided Practice (We Do – Teacher Notes)

**We Do Together:** (Teacher Actions)

- Fold your paper to hide the math drawings. Then, multiply to find the answer to each division problem.
- Unfold your paper to check if your answer is correct.

	Divide Using Multiplication	Check Your Work
1.  $4 \div \frac{1}{4} =$	$4 \times \frac{4}{1} = \frac{4 \times 4}{1 \times 1} = 16$	 $4 \times 4$
2.  $3 \div \frac{1}{5} =$	$3 \times \frac{5}{1} = \frac{3 \times 5}{1 \times 1} = 15$	 $3 \times 5$
3.  $2 \div \frac{1}{3} =$	$2 \times \frac{3}{1} = \frac{2 \times 3}{1 \times 1} = 6$	 $2 \times 3$
4.  $3 \div \frac{1}{2} =$	$3 \times \frac{2}{1} = \frac{3 \times 2}{1 \times 1} = 6$	 $3 \times 2$



## Session 6: Self-Reflection

**Learning Target:** I will divide a whole number by a unit fraction

Briefly discuss student responses:

- What did I learn today about dividing a whole number by a unit fraction?
  
- How confident do I feel about dividing a whole number by a unit fraction on my own?  
*(Thumbs up, down, or sideways)*





# Quick Check - Form F

Name \_\_\_\_\_ Date \_\_\_\_\_

**Learning Target:** I will divide a whole number by a unit fraction.

**Directions:** Write the answer to each problem. (Work time: 4 minutes)

**1.**

$$4 \div \frac{1}{5} = \underline{\hspace{2cm}}$$

**2.**

$$2 \div \frac{1}{8} = \underline{\hspace{2cm}}$$

**3.**

$$5 \div \frac{1}{3} = \underline{\hspace{2cm}}$$

**4.**

$$8 \div \frac{1}{8} = \underline{\hspace{2cm}}$$

**5.**

$$9 \div \frac{1}{7} = \underline{\hspace{2cm}}$$

**6.**

$$3 \div \frac{1}{6} = \underline{\hspace{2cm}}$$

**Learning Target:** I will divide a whole number by a unit fraction

## Session 7: Guided Practice (We Do)

**We Do Together:** (Teacher Actions)

- Restate each division problem based on your conceptual understanding.  
*Example: 3 wholes equally divided into groups of 1-eighth*
- Multiply to find the answer to each division problem. Then, sketch the division problem to check your answer.

1.  $2 \div \frac{1}{8} =$  \_\_\_\_\_

--	--

2.  $3 \div \frac{1}{6} =$  \_\_\_\_\_

--	--	--

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

--	--	--	--

4.  $5 \div \frac{1}{4} =$  \_\_\_\_\_

--	--	--	--	--

**Learning Target:** I will divide a whole number by a unit fraction

## Session 7: Guided Practice (We Do – Continued)

**You Do Together:** (Student Actions)

- Students take turns leading to restating each division problem. Then, multiply to find the answer to each division problem and sketch the original problem to check your answer.

5.  $2 \div \frac{1}{6} =$  \_\_\_\_\_

--	--

6.  $3 \div \frac{1}{4} =$  \_\_\_\_\_

--	--	--	--

7.  $4 \div \frac{1}{8} =$  \_\_\_\_\_

--	--	--	--

8.  $5 \div \frac{1}{6} =$  \_\_\_\_\_

--	--	--	--	--



## Session 7: Self-Reflection

**Learning Target:** I will divide a whole number by a unit fraction

Briefly discuss student responses:

- What did I learn today about dividing a whole number by a unit fraction?
  
- How confident do I feel about dividing a whole number by a unit fraction on my own?  
*(Thumbs up, down, or sideways)*



# Quick Check - Form G

Name \_\_\_\_\_ Date \_\_\_\_\_

**Learning Target:** I will divide a whole number by a unit fraction.

**Directions:** Write the answer to each problem. (Work time: 4 minutes)

**1.**

$$3 \div \frac{1}{4} = \underline{\hspace{2cm}}$$

**2.**

$$4 \div \frac{1}{6} = \underline{\hspace{2cm}}$$

**3.**

$$5 \div \frac{1}{8} = \underline{\hspace{2cm}}$$

**4.**

$$9 \div \frac{1}{3} = \underline{\hspace{2cm}}$$

**5.**

$$8 \div \frac{1}{10} = \underline{\hspace{2cm}}$$

**6.**

$$3 \div \frac{1}{6} = \underline{\hspace{2cm}}$$

**Learning Target:** I will divide a whole number by a unit fraction

## Session 8: Guided Practice (We Do)

**We Do Together:** (Teacher Actions)

- Restate each division problem based on your conceptual understanding.  
*Example: 3 wholes equally divided into groups of 1-eighth*
- Multiply to find the answer to each division problem. Then, sketch the division problem to check your answer.

1.  $2 \div \frac{1}{5} =$  \_\_\_\_\_

--	--

2.  $3 \div \frac{1}{8} =$  \_\_\_\_\_

--	--	--

3.  $4 \div \frac{1}{7} =$  \_\_\_\_\_

--	--	--	--

4.  $5 \div \frac{1}{3} =$  \_\_\_\_\_

--	--	--	--	--

**Learning Target:** I will divide a whole number by a unit fraction

## Session 8: Guided Practice (We Do – Continued)

**You Do Together:** (Student Actions)

- Students take turns leading to restating each division problem. Then, multiply to find the answer to each division problem and sketch the original problem to check your answer.

5.  $2 \div \frac{1}{8} =$  \_\_\_\_\_

--	--

6.  $3 \div \frac{1}{6} =$  \_\_\_\_\_

--	--	--	--

7.  $4 \div \frac{1}{5} =$  \_\_\_\_\_

--	--	--	--

8.  $5 \div \frac{1}{4} =$  \_\_\_\_\_

--	--	--	--	--



## Session 8: Self-Reflection

**Learning Target:** I will divide a whole number by a unit fraction

Briefly discuss student responses:

- What did I learn today about dividing a whole number by a unit fraction?
  
- How confident do I feel about dividing a whole number by a unit fraction on my own?  
*(Thumbs up, down, or sideways)*





# Quick Check - Form H

Name \_\_\_\_\_ Date \_\_\_\_\_

**Learning Target:** I will divide a whole number by a unit fraction.

**Directions:** Write the answer to each problem. (Work time: 4 minutes)

**1.**

$$2 \div \frac{1}{5} = \underline{\hspace{2cm}}$$

**2.**

$$3 \div \frac{1}{2} = \underline{\hspace{2cm}}$$

**3.**

$$5 \div \frac{1}{6} = \underline{\hspace{2cm}}$$

**4.**

$$7 \div \frac{1}{8} = \underline{\hspace{2cm}}$$

**5.**

$$9 \div \frac{1}{6} = \underline{\hspace{2cm}}$$

**6.**

$$8 \div \frac{1}{2} = \underline{\hspace{2cm}}$$



# Independent Practice (You Do)

**Learning Target:** I will divide a whole number by a unit fraction

**Readiness** for multiplying and dividing fractions

**Title of Game:** Play “Division Match-up!”

**Number of Players:** 2

**Objective:** To match your answer cards to unknown problem cards.

**Materials:**

- 1 set of **Problem** and **Answer** cards per group
- 1 recording sheet per player

**Set-up:**

- Deal all 10 **Problem** cards face down in a row.
- Deal 5 **Answer** cards face up to each player.

**Directions:**

- **Player 1** goes first
  - Take a card from the row of face down **Problem** cards and turn it face up
  - Write the problem on the recording sheet
- If **Player 1** has the **Answer** card, place it face up on top of the **Problem** card, take both cards and say:  
*“The answer to \_\_\_ is equal to \_\_\_.”*
- If **Player 1** does not have the answer to the **Problem** card, turn the **Problem** card back over.
- **Players 1 and 2** alternate turns. The **winner** is the first player to match all 5 of their cards.



Names \_\_\_\_\_

Date \_\_\_\_\_

**Learning Target:** I will divide a whole number by a unit fraction

## Independent Practice: Division Match-up!

*(Recording Sheet)*




# Problem Cards (Set A<sub>1</sub> and A<sub>2</sub>)

**Storage Suggestions:** Copy the **Problem (Set A)** cards and **Answer (Set A)** cards in two different colors.  
Store 1 set of each in a sealable bag for each pair of students.

Set A <sub>1</sub>	$2 \div \frac{1}{2}$ Set A <sub>1</sub>	$3 \div \frac{1}{2}$ Set A <sub>1</sub>	$4 \div \frac{1}{2}$ Set A <sub>1</sub>	$5 \div \frac{1}{2}$ Set A <sub>1</sub>
	$6 \div \frac{1}{3}$ Set A <sub>1</sub>	$3 \div \frac{1}{3}$ Set A <sub>1</sub>	$4 \div \frac{1}{3}$ Set A <sub>1</sub>	$5 \div \frac{1}{3}$ Set A <sub>1</sub>
	$6 \div \frac{1}{4}$ Set A <sub>1</sub>	$7 \div \frac{1}{4}$ Set A <sub>1</sub>		
Set A <sub>2</sub>	$2 \div \frac{1}{2}$ Set A <sub>2</sub>	$3 \div \frac{1}{2}$ Set A <sub>2</sub>	$4 \div \frac{1}{2}$ Set A <sub>2</sub>	$5 \div \frac{1}{2}$ Set A <sub>2</sub>
	$6 \div \frac{1}{3}$ Set A <sub>2</sub>	$3 \div \frac{1}{3}$ Set A <sub>2</sub>	$4 \div \frac{1}{3}$ Set A <sub>2</sub>	$5 \div \frac{1}{3}$ Set A <sub>2</sub>
	$6 \div \frac{1}{4}$ Set A <sub>2</sub>	$7 \div \frac{1}{4}$ Set A <sub>2</sub>		



# Answer Cards (Set A<sub>1</sub> and A<sub>2</sub>)

**Storage Suggestions:** Copy the **Problem (Set A)** cards and **Answer (Set A)** cards in two different colors.  
Store 1 set of each in a sealable bag for each pair of students.

Set A <sub>1</sub>	4 Set A <sub>1</sub>	6 Set A <sub>1</sub>	8 Set A <sub>1</sub>	10 Set A <sub>1</sub>
	18 Set A <sub>1</sub>	9 Set A <sub>1</sub>	12 Set A <sub>1</sub>	15 Set A <sub>1</sub>
	24 Set A <sub>1</sub>	28 Set A <sub>1</sub>		
Set A <sub>2</sub>	4 Set A <sub>2</sub>	6 Set A <sub>2</sub>	8 Set A <sub>2</sub>	10 Set A <sub>2</sub>
	18 Set A <sub>2</sub>	9 Set A <sub>2</sub>	12 Set A <sub>2</sub>	15 Set A <sub>2</sub>
	24 Set A <sub>2</sub>	28 Set A <sub>2</sub>		



# Problem Cards (Set B<sub>1</sub> and B<sub>2</sub>)

**Storage Suggestions:** Copy the **Problem (Set B)** cards and **Answer (Set B)** cards in two different colors.

Store 1 set of each in a sealable bag for each pair of students.

Set B <sub>1</sub>	$2 \div \frac{1}{6}$ Set B <sub>1</sub>	$3 \div \frac{1}{6}$ Set B <sub>1</sub>	$4 \div \frac{1}{6}$ Set B <sub>1</sub>	$2 \div \frac{1}{7}$ Set B <sub>1</sub>
	$3 \div \frac{1}{7}$ Set B <sub>1</sub>	$4 \div \frac{1}{7}$ Set B <sub>1</sub>	$2 \div \frac{1}{8}$ Set B <sub>1</sub>	$5 \div \frac{1}{8}$ Set B <sub>1</sub>
	$4 \div \frac{1}{8}$ Set B <sub>1</sub>	$5 \div \frac{1}{9}$ Set B <sub>1</sub>		
Set B <sub>2</sub>	$2 \div \frac{1}{6}$ Set B <sub>2</sub>	$3 \div \frac{1}{6}$ Set B <sub>2</sub>	$4 \div \frac{1}{6}$ Set B <sub>2</sub>	$2 \div \frac{1}{7}$ Set B <sub>2</sub>
	$3 \div \frac{1}{7}$ Set B <sub>2</sub>	$4 \div \frac{1}{7}$ Set B <sub>2</sub>	$2 \div \frac{1}{8}$ Set B <sub>2</sub>	$5 \div \frac{1}{8}$ Set B <sub>2</sub>
	$4 \div \frac{1}{8}$ Set B <sub>2</sub>	$5 \div \frac{1}{9}$ Set B <sub>2</sub>		



# Answer Cards (Set B<sub>1</sub> and B<sub>2</sub>)

**Storage Suggestions:** Copy the **Problem (Set B)** cards and **Answer (Set B)** cards in two different colors.  
Store 1 set of each in a sealable bag for each pair of students.

Set B <sub>1</sub>	12 Set B <sub>1</sub>	18 Set B <sub>1</sub>	24 Set B <sub>1</sub>	14 Set B <sub>1</sub>
	21 Set B <sub>1</sub>	28 Set B <sub>1</sub>	16 Set B <sub>1</sub>	40 Set B <sub>1</sub>
	32 Set B <sub>1</sub>	45 Set B <sub>1</sub>		
Set B <sub>2</sub>	12 Set B <sub>2</sub>	18 Set B <sub>2</sub>	24 Set B <sub>2</sub>	14 Set B <sub>2</sub>
	21 Set B <sub>2</sub>	28 Set B <sub>2</sub>	16 Set B <sub>2</sub>	40 Set B <sub>2</sub>
	32 Set B <sub>2</sub>	45 Set B <sub>2</sub>		



# Problem Cards (Set C<sub>1</sub> and C<sub>2</sub>)

**Storage Suggestions:** Copy the **Problem (Set C)** cards and **Answer (Set C)** cards in two different colors.

Store 1 set of each in a sealable bag for each pair of students.

Set C <sub>1</sub>	$6 \div \frac{1}{3}$ Set C <sub>1</sub>	$7 \div \frac{1}{3}$ Set C <sub>1</sub>	$8 \div \frac{1}{4}$ Set C <sub>1</sub>	$9 \div \frac{1}{3}$ Set C <sub>1</sub>
	$6 \div \frac{1}{6}$ Set C <sub>1</sub>	$7 \div \frac{1}{5}$ Set C <sub>1</sub>	$8 \div \frac{1}{6}$ Set C <sub>1</sub>	$9 \div \frac{1}{6}$ Set C <sub>1</sub>
	$7 \div \frac{1}{7}$ Set C <sub>1</sub>	$8 \div \frac{1}{8}$ Set C <sub>1</sub>		
Set C <sub>2</sub>	$6 \div \frac{1}{3}$ Set C <sub>2</sub>	$7 \div \frac{1}{3}$ Set C <sub>2</sub>	$8 \div \frac{1}{4}$ Set C <sub>2</sub>	$9 \div \frac{1}{3}$ Set C <sub>2</sub>
	$6 \div \frac{1}{6}$ Set C <sub>2</sub>	$7 \div \frac{1}{5}$ Set C <sub>2</sub>	$8 \div \frac{1}{6}$ Set C <sub>2</sub>	$9 \div \frac{1}{6}$ Set C <sub>2</sub>
	$7 \div \frac{1}{7}$ Set C <sub>2</sub>	$8 \div \frac{1}{8}$ Set C <sub>2</sub>		





# Answer Cards (Set C<sub>1</sub> and C<sub>2</sub>)

**Storage Suggestions:** Copy the **Problem (Set C)** cards and **Answer (Set C)** cards in two different colors.  
Store 1 set of each in a sealable bag for each pair of students.

Set C <sub>1</sub>	18 <small>Set C<sub>1</sub></small>	21 <small>Set C<sub>1</sub></small>	32 <small>Set C<sub>1</sub></small>	27 <small>Set C<sub>1</sub></small>
	36 <small>Set C<sub>1</sub></small>	35 <small>Set C<sub>1</sub></small>	48 <small>Set C<sub>1</sub></small>	54 <small>Set C<sub>1</sub></small>
	49 <small>Set C<sub>1</sub></small>	64 <small>Set C<sub>1</sub></small>		
Set C <sub>2</sub>	18 <small>Set C<sub>2</sub></small>	21 <small>Set C<sub>2</sub></small>	32 <small>Set C<sub>2</sub></small>	27 <small>Set C<sub>2</sub></small>
	36 <small>Set C<sub>2</sub></small>	35 <small>Set C<sub>2</sub></small>	48 <small>Set C<sub>2</sub></small>	54 <small>Set C<sub>2</sub></small>
	49 <small>Set C<sub>2</sub></small>	64 <small>Set C<sub>2</sub></small>		



# Questions for Solving Word Problems

$Q_1$

*What is the problem about?*

$Q_2$

*What do I need to find?*

$Q_3$

*What do I know?*

$Q_4$

*What can I try?*

$Q_5$

*Does my answer make sense?*



# Steps for Solving Word Problems

*Q<sub>1</sub>. What is the problem about?*

*Q<sub>2</sub>. What do I need to find?*

*Q<sub>3</sub>. What do I know?*

*Q<sub>4</sub>. What can I try?*

*Q<sub>5</sub>. Does my answer make sense?*