# DELTA MATH
## RtI PROGRAM

# 6th Grade
# Tier 2 Intervention Lessons

**Readiness Standard 6** - 5.NF.7a

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

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

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### IES Recommendations for Tier 2 and 3 intervention lessons:

| | |
|---|---|
| 2. Instructional materials for students receiving interventions should focus intensely on in-depth treatment of whole numbers in kindergarten through grade 5 and on rational numbers in grades 4 through 8. These materials should be selected by committee. | **Low** |
| 3. Instruction during the intervention should be explicit and systematic. This includes providing models of proficient problem solving, verbalization of thought processes, guided practice, corrective feedback, and frequent cumulative review. | **Strong** |
| 4. Interventions should include instruction on solving word problems that is based on common underlying structures. | **Strong** |
| 5. Intervention materials should include opportunities for students to work with visual representations of mathematical ideas and interventionists should be proficient in the use of visual representations of mathematical ideas. | **Moderate** |
| 6. Interventions at all grade levels should devote about 10 minutes in each session to building fluent retrieval of basic arithmetic facts. | **Moderate** |
| 7. Monitor the progress of students receiving supplemental instruction and other students who are at risk. | **Low** |
| 8. Include motivational strategies in tier 2 and tier 3 interventions. | **Low** |

(Institute of Educational Sciences, Assisting Students Struggling with Mathematics: Response to Intervention (RtI) for Elementary and Middle Schools, 2009, p. 6)

# Gradual release of responsibility model

## Teacher Responsibility

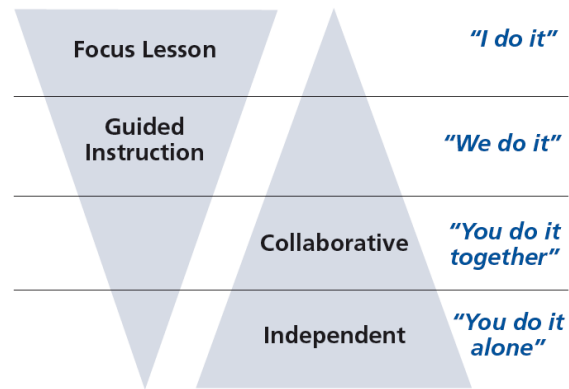| | |
|---|---|
| Focus Lesson | *"I do it"* |
| Guided Instruction | *"We do it"* |
| Collaborative | *"You do it together"* |
| Independent | *"You do it alone"* |

**Figure 1**

[(Dr. Douglas Fisher, Effective Use of the Gradual Release of Responsibility Model)](#)

# Planning Guide: Session 1

6<sup>th</sup> Grade - Readiness Standard 6 - 5.NF.7a

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

**Readiness** for multiplying and dividing fractions

| Recommended Actions | |
|---|---|
| **Beginning** <br> *(15 min.)* | Review the readiness standard with the intervention group using the **Guided Review** <br><br> ➢ Introduce the learning target and why it is important for future learning <br><br> ➢ Read each question on the Guided Review and ask students to share what they remember from the previous school year. |
| **Middle** <br> *(5 min.)* | ➢ Ask students to reflect on their progress towards the learning target <br><br>    ➢ What did I remember about the learning target? <br><br>    ➢ What did I learn today about the learning target? <br><br>    ➢ How confident do I feel about doing the learning target on my own? |
| **End** <br> *(10 min.)* | ➢ Assess each student's progress using **Quick Check – Form A** <br><br> ➢ Guide students to self-correct their **Quick Check – Form A** <br><br> ➢ Guide students to chart their progress by recording the date and Quick Check score in their **Growth Chart** <br><br> ➢ Collect each student's Quick Check and Growth Chart |
| **After** | ➢ Create sub-groups to differentiate the middle of sessions 2 through 8 <br><br>    o Group 1 – Include students who did not meet the learning goal <br><br>    o Group 2 – Include students who met or exceeded the learning goal |

# 6<sup>th</sup> Grade Fall Guided Review

Name_____ Date_____

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

---

**1.**

Divide: $\dfrac{1}{9} \div 3$

○ $\dfrac{1}{27}$　　　○ $\dfrac{3}{9}$　　　○ $3$　　　○ $27$

---

**2.**

Divide: $\dfrac{1}{4} \div 8$

○ $32$　　　○ $\dfrac{4}{8}$　　　○ $\dfrac{8}{4}$　　　○ $\dfrac{1}{32}$

---

**3.**

Divide: $\dfrac{1}{10} \div 2$

○ $\dfrac{20}{1}$　　　○ $\dfrac{1}{20}$　　　○ $\dfrac{2}{10}$　　　○ $\dfrac{10}{2}$

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# 6<sup>th</sup> Grade Winter Guided Review

Readiness Standard 6 - 5.NF.7a

Name_____ Date_____

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

---

**1.**

Divide: $\dfrac{1}{8} \div 2$

○ $\dfrac{1}{16}$  ○ $\dfrac{2}{8}$  ○ 4  ○ 16

---

**2.**

Divide: $\dfrac{1}{3} \div 6$

○ 18  ○ $\dfrac{3}{6}$  ○ $\dfrac{6}{3}$  ○ $\dfrac{1}{18}$

---

**3.**

Divide: $\dfrac{1}{7} \div 2$

○ $\dfrac{14}{1}$  ○ $\dfrac{7}{2}$  ○ $\dfrac{1}{14}$  ○ $\dfrac{2}{7}$

---

# 6th Grade Spring Guided Review

Readiness Standard 6 - 5.NF.7a

Name_____ Date_____

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

---

**1.**

Divide: $\dfrac{1}{6} \div 3$

○ 18      ○ $\dfrac{3}{6}$      ○ 2      ○ $\dfrac{1}{18}$

---

**2.**

Divide: $\dfrac{1}{9} \div 5$

○ $\dfrac{1}{45}$      ○ 45      ○ $\dfrac{5}{9}$      ○ $\dfrac{9}{5}$

---

**3.**

Divide: $\dfrac{1}{8} \div 7$

○ $\dfrac{7}{8}$      ○ $\dfrac{56}{1}$      ○ $\dfrac{1}{56}$      ○ $\dfrac{8}{7}$

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# Session 1:  Self-Reflection

6th Grade - Readiness Standard 6 - 5.NF.7a

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

Briefly discuss student responses:

➢ What did I remember today about dividing a unit fraction by a whole number?

➢ What did I learn today about dividing a unit fraction by a whole number?

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

Name_____ Date_____

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

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

| | |
|---|---|
| **1.**<br><br>$\frac{1}{4} \div 5 = $ _____ | **2.**<br><br>$\frac{1}{8} \div 4 = $ _____ |
| **3.**<br><br>$\frac{1}{6} \div 2 = $ _____ | **4.**<br><br>$\frac{1}{9} \div 6 = $ _____ |
| **5.**<br><br>$\frac{1}{3} \div 4 = $ _____ | **6.**<br><br>$\frac{1}{4} \div 8 = $ _____ |

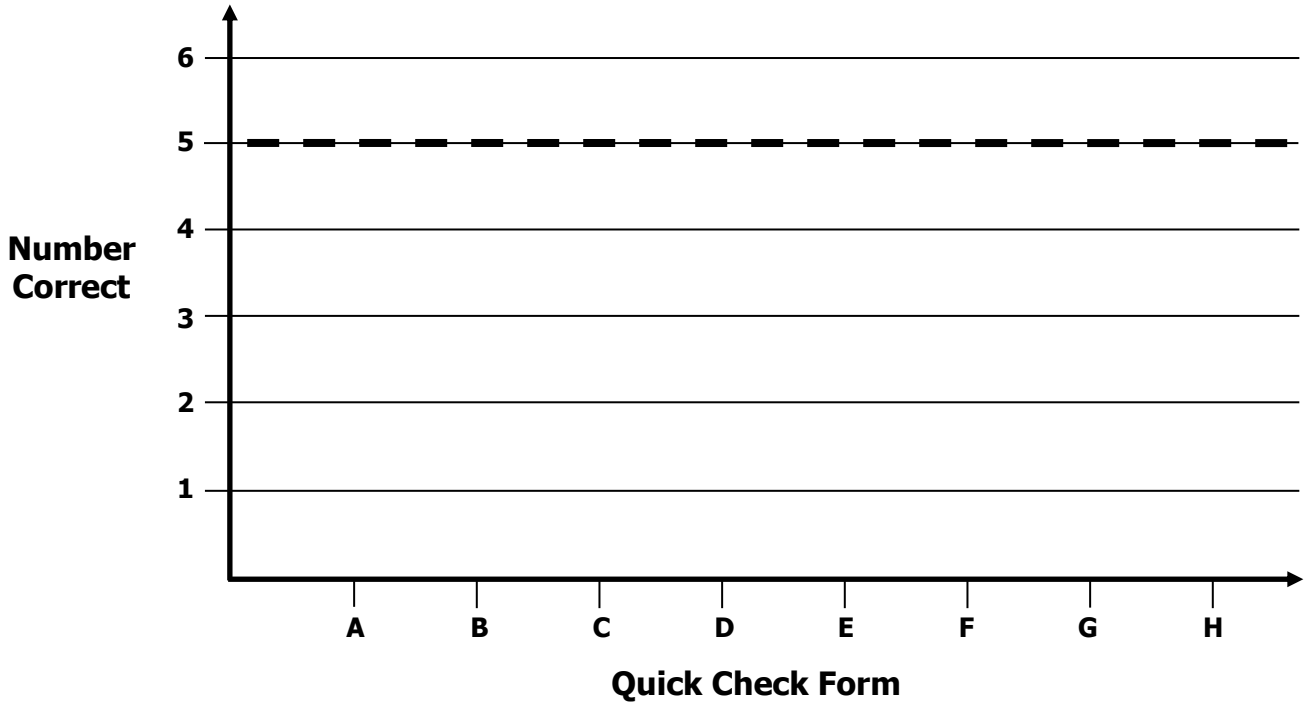# Growth Chart

6th Grade - Readiness Standard 6 - 5.NF.7a

Name_____ Date_____

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

**Goal:**  5 out of 6 correct



**Number Correct** (y-axis: 1–6)

Quick Check Form (x-axis: A B C D E F G H)

**Quick Check Form**

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

# Planning Guide: Sessions 2 Through 8

6th Grade - Readiness Standard 6 - 5.NF.7a

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

**Readiness** for multiplying and dividing fractions

| Recommended Actions | |
|---|---|
| **Beginning** (5 min.) | ➢ Review the learning target with the whole group and ask each student to set a goal for today's learning |

| **Middle** (15 min.) | **Group 1:** *(Students who <u>did not</u> meet the learning goal on the previous Quick Check)*<br><br>➢ Model solving a word problem – "I do"<br>➢ Guided Practice – "We do together/ You do together"<br><br>**Session 2:** Fold fraction squares to divide a unit fraction by a whole number<br>**Session 3:** Draw on fraction squares to divide a unit fraction by a whole number<br>**Session 4:** Use multiplication to divide a unit fraction by a whole number | **Group 2:** *(Students who met the learning goal)*<br><br>➢ Independent practice – "You do alone"<br><br><br><br>**Activity:** *Division Match-up!*<br><br><br><br>*(Look for additional activities in 5th grade core instruction resources.)* |

| **End** (10 min.) | ➢ Bring the students back together.<br>➢ Ask students to reflect on their progress towards the learning target<br>    o What did I learn today about dividing a unit fraction by a whole number?<br>    o How confident do you feel about dividing a unit fraction by a whole number on my own? (Thumbs up, down, or sideways)<br>➢ Assess each student's progress using the next **Quick Check** form<br>➢ Guide students to self-correct their **Quick Check**<br>➢ Guide students to chart their progress in their **Growth Chart**<br>    o If not using Delta Math lessons, record the activity in the table<br>➢ Collect each student's **Quick Check** and **Growth Chart** | |

| **After** | ➢ Regroup students to differentiate the middle of sessions 3 through 8<br>    o Promote students who met the learning goal to group 2<br>    o Exit students who met the learning goal for a third time<br>➢ Problem solve with a team to plan additional support for students who did not exit | |

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

**Readiness** for multiplying and dividing fractions

Gianna has one-half of a pound of ground beef and is planning to make 4 meatballs. If each meatball has the equal amounts of ground beef, how much ground beef will be in each meatball?

# Session 2: Modeling (I Do – Visual Support)

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

**Readiness** for multiplying and dividing fractions

Gianna has one-half of a pound of ground beef and is planning to make 4 meatballs. If each meatball has the equal amounts of ground beef, how much ground beef will be in each meatball?

**Fold and outline 1 half of the whole**

$\frac{1}{2}$ of the whole

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

**Find 1 fourth of the half**

$\frac{1}{2}$ of the whole

*4 Equal Parts*

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

**Unfold and find the part of the whole**

$\frac{1}{2}$ of the whole

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

*4 Equal Parts*

$$\frac{1}{2} \div 4 = \frac{1}{8}$$
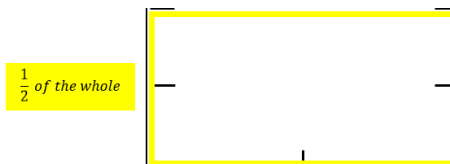
# Session 2: Modeling (I Do - Teacher Notes)

6th Grade - Readiness Standard 6 - 5.NF.7a

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

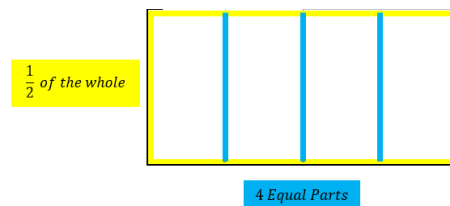**Readiness** for multiplying and dividing fractions

> Gianna has one-half of a pound of ground beef and is planning to make 4 meatballs. If each meatball has the equal amounts of ground beef, how much ground beef will be in each meatball?

**I am going to think aloud to model solving this problem.**
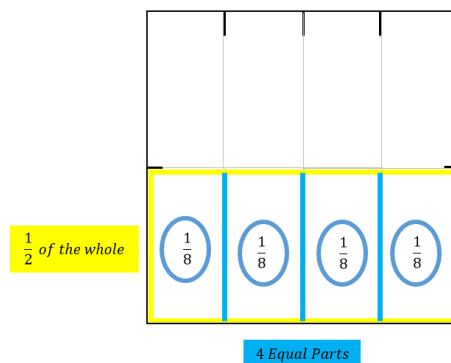
**Your job is to watch, listen, think and ask questions.**

---

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

**This problem is about Gianna making meatballs.**

---

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

**I need to find how much ground beef will be in each meatball.**

---

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

**I know that she has one-half of a pound of ground beef and plans to make 4 meatballs.**

---

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

**I am going to try modelling this situation using a square piece of paper.**
(Hold up a paper square, *use upper right square on __page 10__*, and write the multiplication problem.)

**I will begin by folding the square in half to represent the half of a pound of ground beef.**
(Fold the square in half and outline it using a yellow highlighter. Open the paper to show students that the highlighted area is half of the whole. Fold it back again to show the highlighted half for the next step.)

**Since Gianna plans to make 4 meatballs, I will separate this 1 half into 4 equal parts.**
(Fold the half into fourths, see drawing on **page 8**, and outline the bottom fourth using blue highlighter.)

**Each section represents 1 of the meatballs…we need to find it's fractional part of the whole.**
(Open the paper to reveal the whole.)

**I see that the whole is made up of 8 parts and each part is equal to 1 of the meatballs.**
(Trace over the folds with a pencil and count the 8 sections.)

**Therefore, each section is equal to 1 eighth of the whole.**
(Write $\frac{1}{8}$ inside of the 4 sections of the half and circle each 8th.)

**And each meatballs will include 1 eighth of a pound of ground beef.**



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

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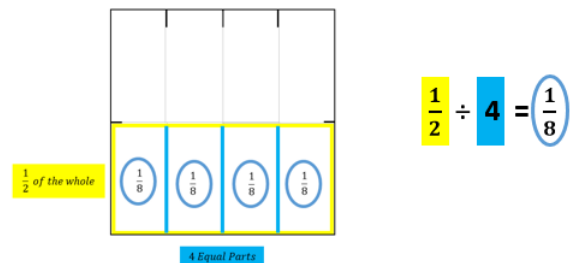
**Last, I need to make sure that my answer makes sense.**

**I found that each of Gianna's meatballs will include 1 eighth of a pound of ground beef. It makes sense because I represented the half of a pound of ground beef with a paper square and folded it into 4 equal parts to find how much of the whole will be in each meatball.**

# Squares for Dividing  (Set 1)

6th Grade - Readiness Standard 6 - 5.NF.7a

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

**Note:**  The teacher may use the upper right square for the Modeling problem.

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

Use for Problem 1

Use for Problem 2

Use for Problem 3

Use for Problem 4

# Squares for Dividing  (Set 2)

6<sup>th</sup> Grade - Readiness Standard 6 - 5.NF.7a

**(You Do Together, problems 5-8)**

Use for
Problem 5

Use for
Problem 6

Use for
Problem 7

Use for
Problem 8

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

# 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.** $\frac{1}{3} \div 4$ | **2.** $\frac{1}{4} \div 2$ |
| **3.** $\frac{1}{3} \div 3$ | **4.** $\frac{1}{2} \div 3$ |

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

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

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

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

# Session 2: 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.
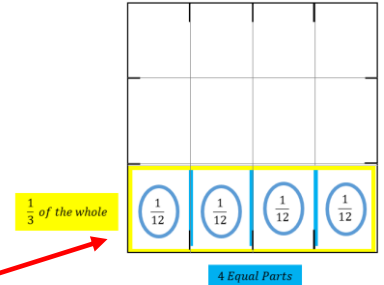
| | |
|---|---|
| **1.** $$\frac{1}{3} \div 4 = \frac{1}{12}$$ *1 third equally divided 4 ways* | **2.** $$\frac{1}{4} \div 2 = \frac{1}{8}$$ *1 fourth equally divided 2 ways* |
| **3.** $$\frac{1}{3} \div 3 = \frac{1}{9}$$ *1 third equally divided 3 ways* | **4.** $$\frac{1}{2} \div 3 = \frac{1}{6}$$ *1 half equally divided 3 ways* |

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

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

| | |
|---|---|
| **5.** $$\frac{1}{4} \div 4 = \frac{1}{16}$$ *1 fourth equally divided 4 ways* | **6.** $$\frac{1}{3} \div 2 = \frac{1}{6}$$ *1 third equally divided 2 ways* |
| **7.** $$\frac{1}{2} \div 2 = \frac{1}{4}$$ *1 half equally divided 2 ways* | **8.** $$\frac{1}{4} \div 3 = \frac{1}{12}$$ *1 fourth equally divided 3 ways* |

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

Briefly discuss student responses:

> ➢ What did I learn today about dividing a unit fraction by a whole number?

> ➢ How confident do I feel about dividing a unit fraction by a whole number on my own?
> *(Thumbs up, down, or sideways)*

# Quick Check - Form B

6th Grade - Readiness Standard 6 - 5.NF.7a

Name_____ Date_____

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

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

| | |
|---|---|
| **1.** $\dfrac{1}{4} \div 3 = $ _____ | **2.** $\dfrac{1}{6} \div 4 = $ _____ |
| **3.** $\dfrac{1}{5} \div 7 = $ _____ | **4.** $\dfrac{1}{10} \div 5 = $ _____ |
| **5.** $\dfrac{1}{4} \div 2 = $ _____ | **6.** $\dfrac{1}{8} \div 4 = $ _____ |

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

**Readiness** for multiplying and dividing fractions

Gianna loves to excersize and frequently eats almonds for extra protien.  Her dad gave her a one-third pound bag of almonds.  She ate equal amounts each hour during a 6 hour time interval.  If she ate all of the almonds during this 6 hour time interval, how many almonds did she eat each hour?

6th Grade - Readiness Standard 6 - 5.NF.7a

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

**Readiness** for multiplying and dividing fractions

## 1 Pound of Almonds

$$\frac{1}{3} \div 6 = \frac{1}{18}$$

$\frac{1}{3}$ *of a pound*

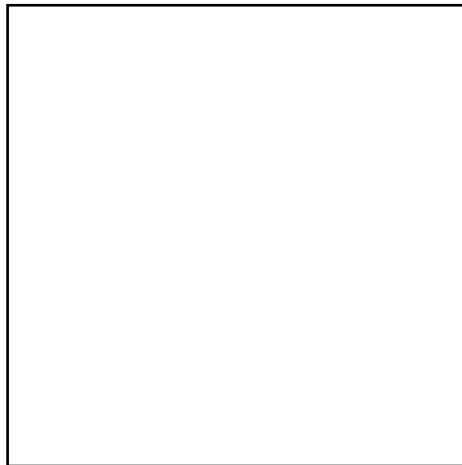| $\frac{1}{18}$ | $\frac{1}{18}$ | $\frac{1}{18}$ | $\frac{1}{18}$ | $\frac{1}{18}$ | $\frac{1}{18}$ |

*6 equal parts*
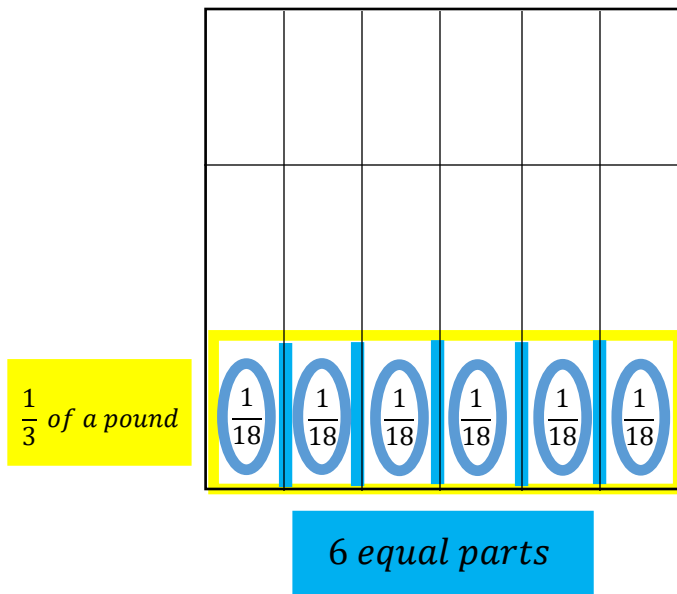
# Session 3: Modeling (I Do - Teacher Notes)

6th Grade - Readiness Standard 6 - 5.NF.7a

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

**Readiness** for multiplying and dividing fractions

> Gianna loves to excersize and frequently eats almonds for extra protien. Her dad gave her a one-third pound bag of almonds. She ate equal amounts each hour during a 6 hour time interval. If she ate all of the almonds during this 6 hour time interval, how many almonds did she eat each hour?

**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 Gianna eating almonds.**

---

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

**I need to find how much she ate each hour.**

---

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

**I know that she started with a one-third pound bag of almonds and she ate equal amounts each hour during a**

**6 hour time interval.**

---

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

**I am going to try using an area drawing to find the part of the whole that she ate each hour.**
(Write the division problem above the square.)

**I will begin by representing 1 third of a pound.**
(Use the guide for drawing fractions and draw lines separating the 3 thirds,
outline the bottom third with a yellow highlighter and label it.)

1 Pound of Almonds

$\frac{1}{3} \div 6 = \frac{1}{18}$

**Now I need to separate this third into 6 equal parts for each hour that she ate.**
(Use the guide for drawing fractions and draw 5 lines with a blue highlighter
that separate the third into 6 equal parts and label it.)

**To see what part of the whole each section equals, I will extend the vertical lines.**
(Extend the vertical lines with a pencil.)

**Since the whole is made up of 18 equal parts…I can count each part…or multiply 3 times 6…**
(Point with your pencil to show both techniques.)

$\frac{1}{3}$ of a pound | $\frac{1}{18}$ $\frac{1}{18}$ $\frac{1}{18}$ $\frac{1}{18}$ $\frac{1}{18}$ $\frac{1}{18}$

**then each part is equal to 1 eighteenth.**

(Write "$\frac{1}{18}$" and circle the fractions in the 6 sections at the bottom.)
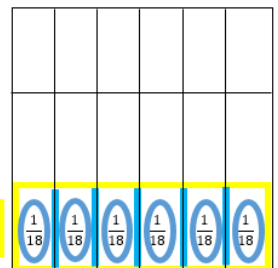
6 equal parts

---

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

**I found that Gianna ate 1 eighteenth of a pound of almonds each hour for 6 hours. It makes sense because I represented the fractional amount that she started with and separated it into 6 equal parts to find how much of the whole each part was equal to.**

# 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.
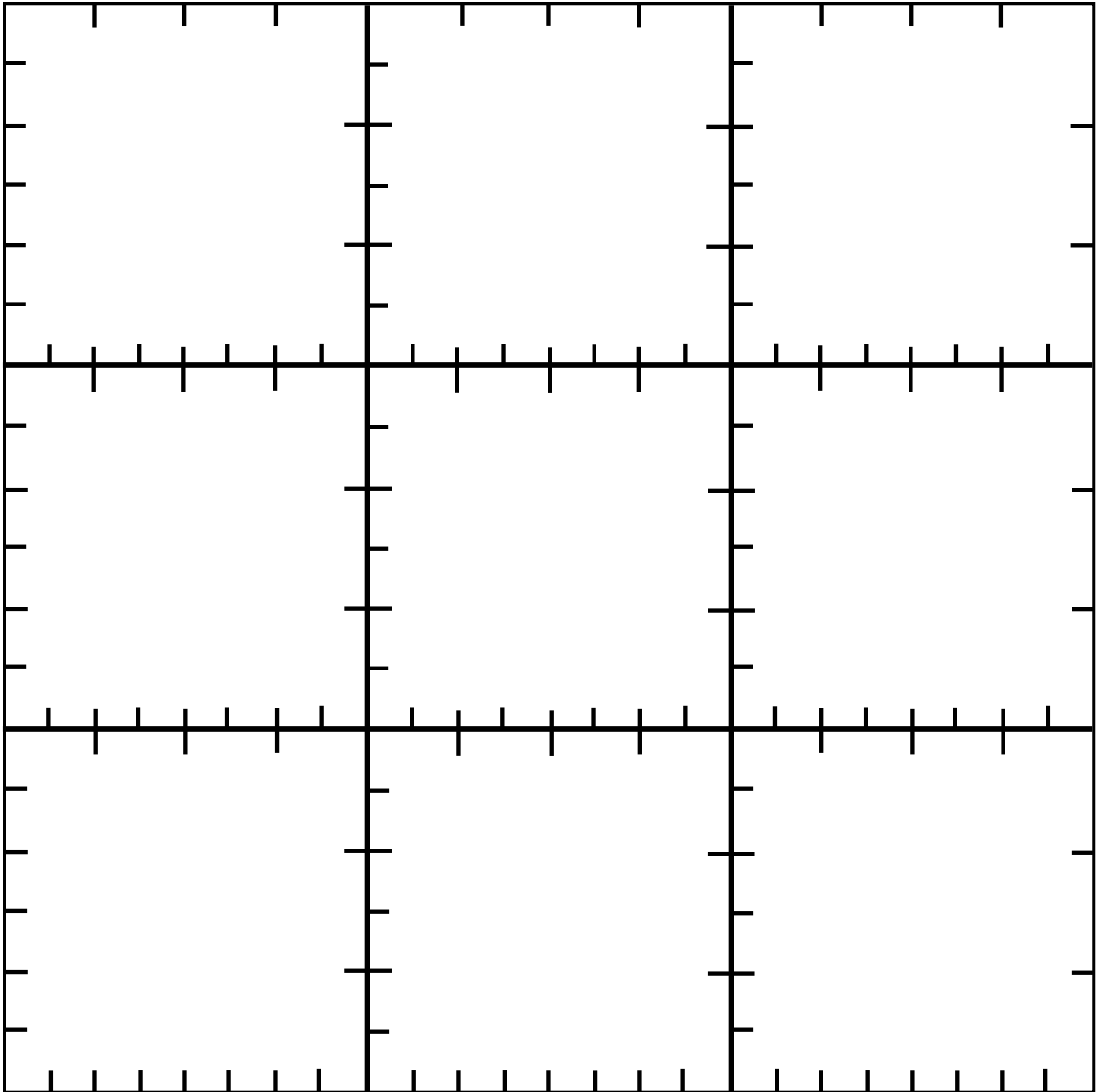
**Name** _____   **Date** _____

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

# Session 3: Guided Practice (We Do)

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

➢ Restate each division problem based on your conceptual understanding.
*Example: 1 fourth equally divided 2 ways*

➢ Use the square guide to help you draw each problem.

**1.**  $\frac{1}{4}$ ÷ 2 = _____
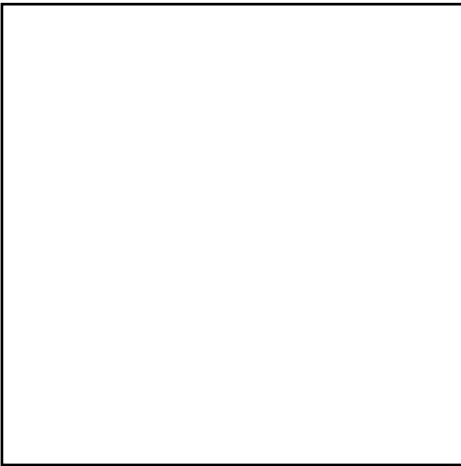
**2.**  $\frac{1}{6}$ ÷ 3 = _____

**3.**  $\frac{1}{3}$ ÷ 4 = _____
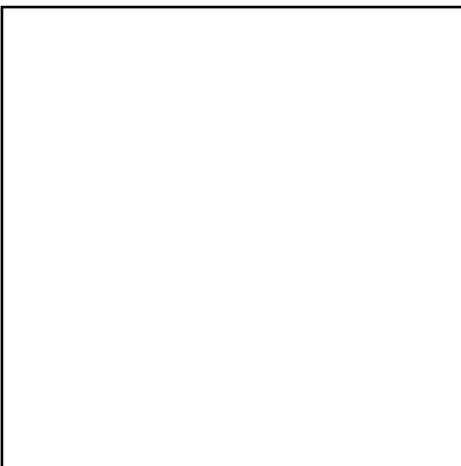
**4.**  $\frac{1}{8}$ ÷ 6 = _____
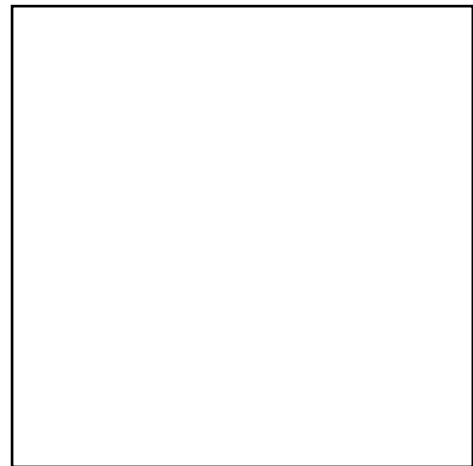
**Learning Target:** I will divide a unit fraction by a whole number

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

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

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

**5.**  $\dfrac{1}{3}$ ÷ 6 = _____

**6.**  $\dfrac{1}{2}$ ÷ 3 = _____

**7.**  $\dfrac{1}{4}$ ÷ 8 = _____

**8.**  $\dfrac{1}{8}$ ÷ 2 = _____

**Learning Target:** I will divide a unit fraction by a whole number
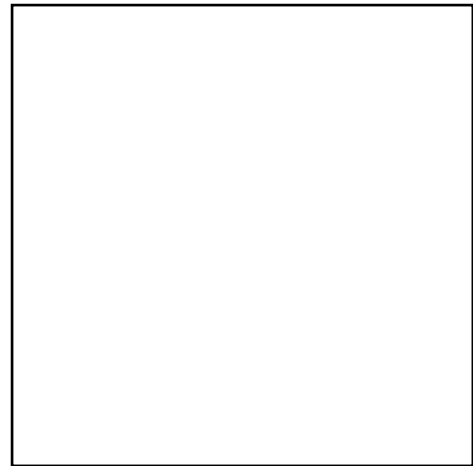
# Session 3: Guided Practice (We Do – Teacher Notes)

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

➢ Restate each division problem based on your conceptual understanding.
  *Example: 1 fourth equally divided 2 ways?*

➢ Use the square guide to help you draw each problem.

*1 fourth equally divided 2 ways*

**1.** $\dfrac{1}{4} \div 2 = \dfrac{1}{8}$

$\dfrac{1}{4}$

$\dfrac{1}{8}$  $\dfrac{1}{8}$

2 equal parts

*1 sixth equally divided 3 ways*

**2.** $\dfrac{1}{6} \div 3 = \dfrac{1}{18}$

$\dfrac{1}{6}$

$\dfrac{1}{18}$  $\dfrac{1}{18}$  $\dfrac{1}{18}$

3 equal parts

*1 third equally divided 4 ways*

**3.** $\dfrac{1}{3} \div 4 = \dfrac{1}{12}$

$\dfrac{1}{3}$

$\dfrac{1}{12}$  $\dfrac{1}{12}$  $\dfrac{1}{12}$  $\dfrac{1}{12}$

4 equal parts

*1 eighth equally divided 6 ways*

**4.** $\dfrac{1}{8} \div 6 = \dfrac{1}{48}$

$\dfrac{1}{8}$

$\dfrac{1}{48}$  $\dfrac{1}{48}$  $\dfrac{1}{48}$  $\dfrac{1}{48}$  $\dfrac{1}{48}$  $\dfrac{1}{48}$

6 equal parts
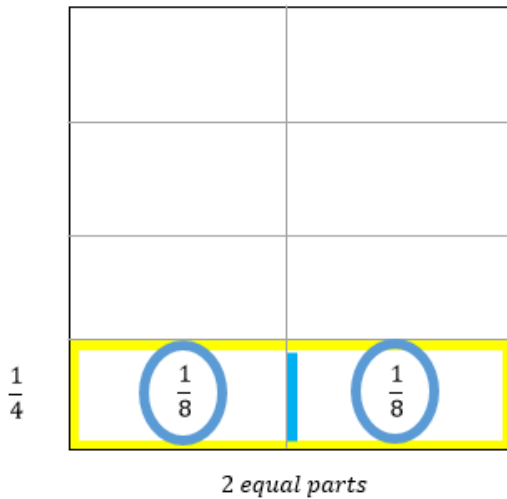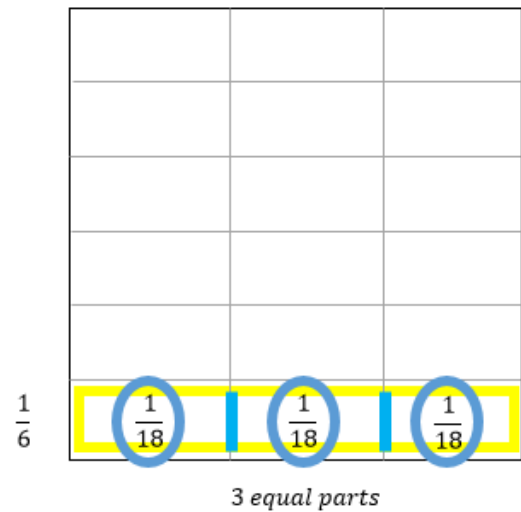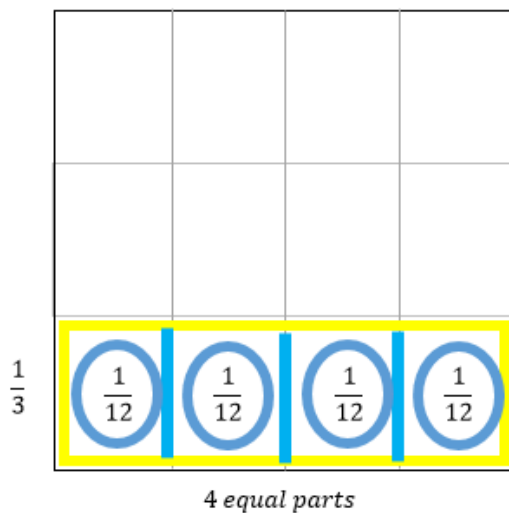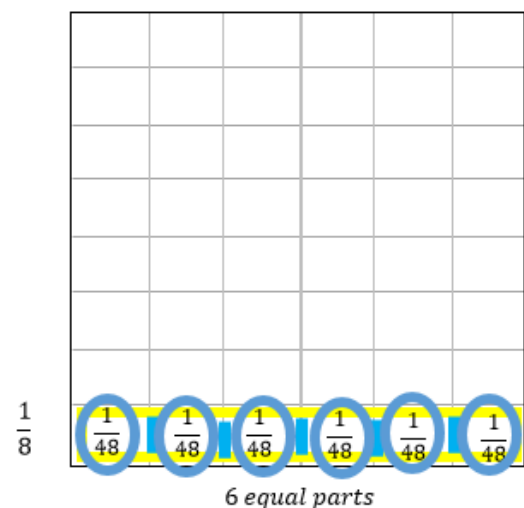
# Session 3: Self-Reflection
6<sup>th</sup> Grade - Readiness Standard 6 - 5.NF.7a

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

Briefly discuss student responses:

> ➢ What did I learn today about dividing a unit fraction by a whole number?

> ➢ How confident do I feel about dividing a unit fraction by a whole number on my own?
> *(Thumbs up, down, or sideways)*

# Quick Check - Form C

6th Grade - Readiness Standard 6 - 5.NF.7a

Name_____ Date_____

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

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

| | |
|---|---|
| **1.**<br><br>$$\frac{1}{5} \div 2 = \underline{\hspace{1cm}}$$ | **2.**<br><br>$$\frac{1}{4} \div 5 = \underline{\hspace{1cm}}$$ |
| **3.**<br><br>$$\frac{1}{7} \div 4 = \underline{\hspace{1cm}}$$ | **4.**<br><br>$$\frac{1}{10} \div 2 = \underline{\hspace{1cm}}$$ |
| **5.**<br><br>$$\frac{1}{5} \div 10 = \underline{\hspace{1cm}}$$ | **6.**<br><br>$$\frac{1}{9} \div 3 = \underline{\hspace{1cm}}$$ |

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

**Readiness** for multiplying and dividing fractions

Gianna used an area drawing to find the answer to $\frac{1}{4} \div 5$. Look for structure in her drawing that would help write a multiplication problem that can be used to find the same answer.

$$\frac{1}{4} \div 5 = \frac{1}{20}$$



5 *equal parts*

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

**Readiness** for multiplying and dividing fractions

Gianna used an area drawing to find the answer to $\frac{1}{4} \div 5$. Look for structure in her drawing that would help write a multiplication problem that can be used to find the same answer.

$$\frac{1}{4} \div 5 = \frac{1}{20}$$

$$\frac{1}{4} \times \frac{1}{5} = \frac{1 \times 1}{4 \times 5} = \frac{1}{20}$$



$\frac{1}{4}$   $\frac{1}{20}$   $\frac{1}{20}$   $\frac{1}{20}$   $\frac{1}{20}$   $\frac{1}{20}$

5 *equal parts*

$\frac{1}{5}$ *of the whole*
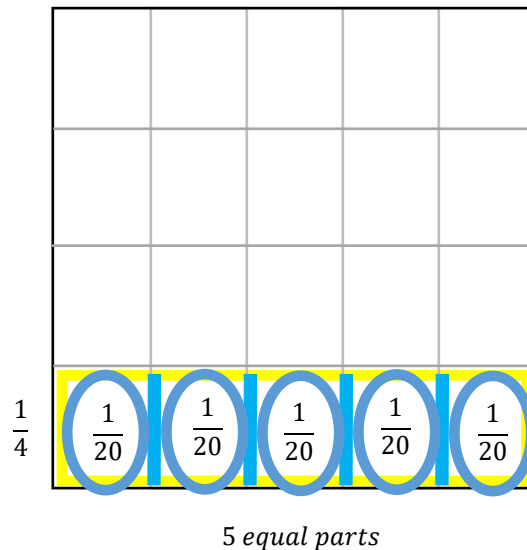
# Session 4: Modeling (I Do - Teacher Notes)

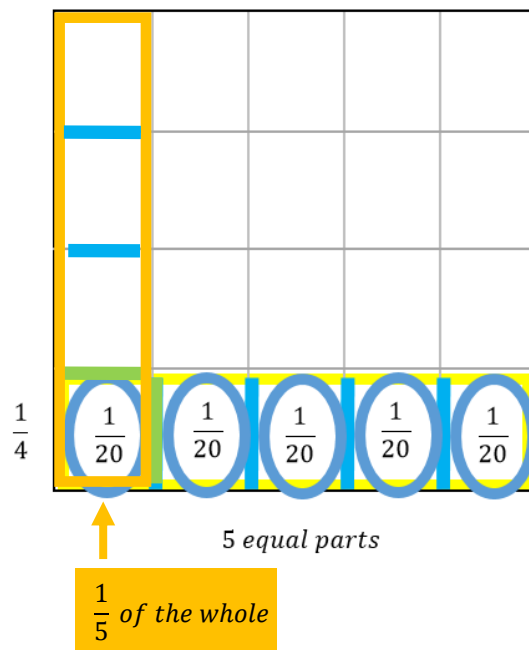6th Grade - Readiness Standard 6 - 5.NF.7a

**Learning Target:** I will divide a unit fraction by a whole number
**Readiness** for multiplying and dividing fractions

Gianna used an area drawing to find the answer to $\frac{1}{4} \div 5$. Look for structure in her 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 Gianna using an area drawing to divide a unit fraction by a whole number.**

---

**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 1 fourth separated into 5 equal parts and the answer is 1 twentieth.**

---

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

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

**The first vertical section is 1 fifth of the whole.**
(Outline the first column of the diagram with orange highlighter
and write "$\frac{1}{5}$ of the whole" below it.)

**And…1 fourth of the fifth is 1 twentieth.**
(Draw 3 lines with blue highlighter to separate the fifth into 4 equal parts.)

$$\frac{1}{4} \div 5 = \frac{1}{20}$$

$$\frac{1}{4} \times \frac{1}{5} = \frac{1 \times 1}{4 \times 5} = \frac{1}{20}$$



$\frac{1}{4}$   $\frac{1}{20}$ $\frac{1}{20}$ $\frac{1}{20}$ $\frac{1}{20}$ $\frac{1}{20}$

5 *equal parts*

$\frac{1}{5}$ *of the whole*
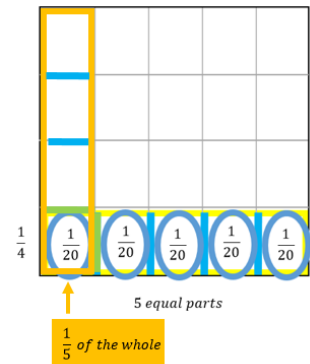
**Can you see the multiplication problem 1 fourth of 1 fifth?**
(Write the multiplication problem $\frac{1}{4}$ x $\frac{1}{5}$ below the original division problem.)

**When I multiply fractions without a drawing, I multiply the denominators to find the size of each part...**
**4 times 5…equals 20.**
(Write "$= \frac{}{4 \times 5} = \frac{}{20}$".)

**Then I multiply the numerators to see how many parts I have…1 times 1…equals 1.**
(Write the numerators "1 x 1" and "1".)

---

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

**I found that using multiplication by 1 over the given whole number will result in the same answer to the division problem. It makes sense because I can see both fractions in the math drawing. Let's see if it works for all of the guided practice problems.**

Name _____ Date _____

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

# Session 4: 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.

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

**Name** _____  **Date** _____

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

# Session 4: **Guided Practice** (We Do - Continued)

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

> Students take turns leading to divide using multiplication.

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

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

# Session 4: 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.** $\dfrac{1}{4} \div 2 = \dfrac{1}{8}$ | $\dfrac{1}{4} \times \dfrac{1}{2} = \dfrac{1 \times 1}{4 \times 2} = \dfrac{1}{8}$ |  |
| **2.** $\dfrac{1}{6} \div 3 = \dfrac{1}{18}$ | $\dfrac{1}{6} \times \dfrac{1}{3} = \dfrac{1 \times 1}{6 \times 3} = \dfrac{1}{18}$ |  |
| **3.** $\dfrac{1}{3} \div 4 = \dfrac{1}{12}$ | $\dfrac{1}{3} \times \dfrac{1}{4} = \dfrac{1 \times 1}{3 \times 4} = \dfrac{1}{12}$ |  |
| **4.** $\dfrac{1}{8} \div 6 = \dfrac{1}{48}$ | $\dfrac{1}{8} \times \dfrac{1}{6} = \dfrac{1 \times 1}{8 \times 6} = \dfrac{1}{48}$ |  |

# Session 4: Self-Reflection

6th Grade - Readiness Standard 6 - 5.NF.7a

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

Briefly discuss student responses:

➢ What did I learn today about dividing a unit fraction by a whole number?

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

# Quick Check - Form D

6th Grade - Readiness Standard 6 - 5.NF.7a

## Name_____ Date_____

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

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

| | |
|---|---|
| **1.**<br><br>$\dfrac{1}{2} \div 6 = $ _____ | **2.**<br><br>$\dfrac{1}{5} \div 3 = $ _____ |
| **3.**<br><br>$\dfrac{1}{8} \div 9 = $ _____ | **4.**<br><br>$\dfrac{1}{6} \div 8 = $ _____ |
| **5.**<br><br>$\dfrac{1}{4} \div 6 = $ _____ | **6.**<br><br>$\dfrac{1}{2} \div 10 = $ _____ |

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

# Session 5:  Guided Practice  (We Do)

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

➢ Restate each division problem based on your conceptual understanding.
*Example:  1 fourth equally divided 2 ways*

➢ Use the square guide to help you draw each problem.

**1.**     $\dfrac{1}{4}$  ÷  3  =  _____

**2.**     $\dfrac{1}{6}$  ÷  2  =  _____

**3.**     $\dfrac{1}{3}$  ÷  6  =  _____
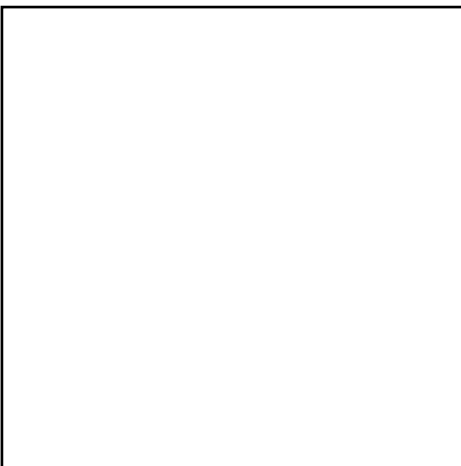
**4.**     $\dfrac{1}{8}$  ÷  4  =  _____
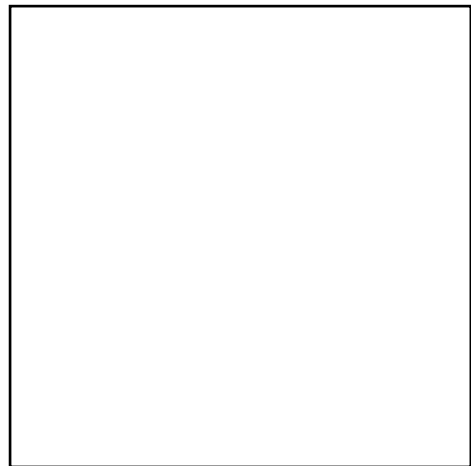
**Learning Target:** I will divide a unit fraction by a whole number

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

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

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

**5.**  $\dfrac{1}{3} \div 4 = $ _____

**6.**  $\dfrac{1}{2} \div 5 = $ _____

**7.**  $\dfrac{1}{4} \div 6 = $ _____

**8.**  $\dfrac{1}{8} \div 3 = $ _____

# Session 5:  Self-Reflection

6th Grade - Readiness Standard 6 - 5.NF.7a

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

Briefly discuss student responses:

➢ What did I learn today about dividing a unit fraction by a whole number?

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

# Quick Check - Form E

6th Grade - Readiness Standard 6 - 5.NF.7a

Name_____ Date_____

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

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

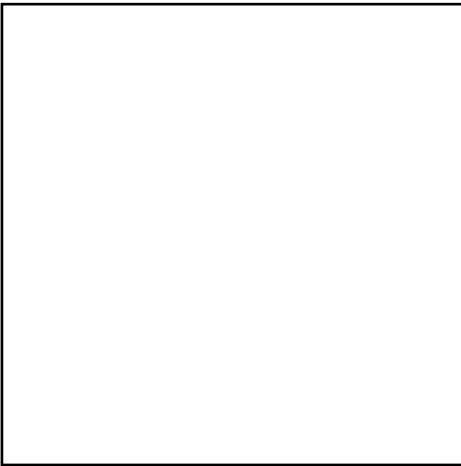| | |
|---|---|
| **1.**<br><br>$\dfrac{1}{4} \div 5 = $ _____ | **2.**<br><br>$\dfrac{1}{8} \div 4 = $ _____ |
| **3.**<br><br>$\dfrac{1}{6} \div 2 = $ _____ | **4.**<br><br>$\dfrac{1}{9} \div 6 = $ _____ |
| **5.**<br><br>$\dfrac{1}{3} \div 4 = $ _____ | **6.**<br><br>$\dfrac{1}{4} \div 8 = $ _____ |

Name _____     Date _____

**Learning Target:**  I will divide a unit fraction by a whole number
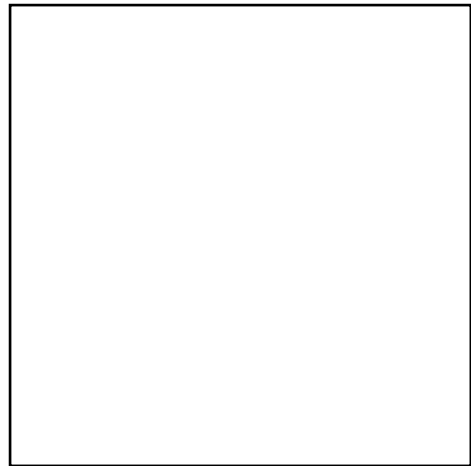
# Session 6:  Guided Practice  (We Do)

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

➢ Restate each division problem based on your conceptual understanding.
   *Example:  1 fourth equally divided 2 ways*

➢ Use the square guide to help you draw each problem.

**1.**      $\frac{1}{3}$  ÷  2  =  _____

**2.**      $\frac{1}{8}$  ÷  3  =  _____
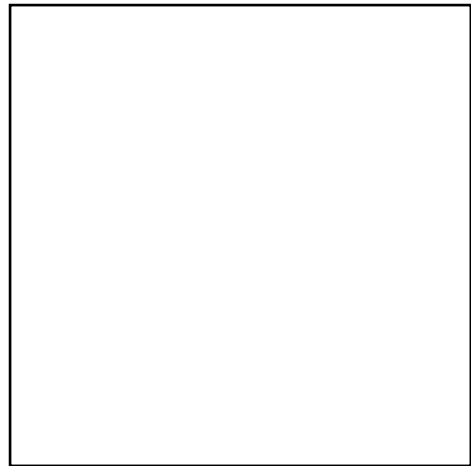
**3.**      $\frac{1}{6}$  ÷  4  =  _____

**4.**      $\frac{1}{2}$  ÷  6  =  _____

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

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

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

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

**5.**  $\dfrac{1}{8} \div 6 =$ _____

**6.**  $\dfrac{1}{4} \div 3 =$ _____

**7.**  $\dfrac{1}{3} \div 8 =$ _____

**8.**  $\dfrac{1}{6} \div 4 =$ _____

# Session 6:  Self-Reflection

6th Grade - Readiness Standard 6 - 5.NF.7a

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

Briefly discuss student responses:

- ➢ What did I learn today about dividing a unit fraction by a whole number?

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

# Quick Check - Form F

6th Grade - Readiness Standard 6 - 5.NF.7a

Name_____ Date_____

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

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

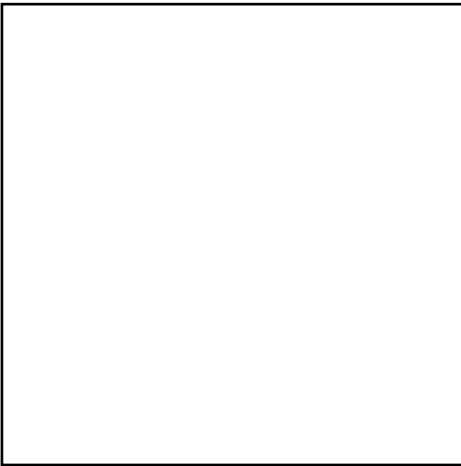| | |
|---|---|
| **1.**<br><br>$\dfrac{1}{4} \div 3 = $ _____ | **2.**<br><br>$\dfrac{1}{6} \div 4 = $ _____ |
| **3.**<br><br>$\dfrac{1}{5} \div 7 = $ _____ | **4.**<br><br>$\dfrac{1}{10} \div 5 = $ _____ |
| **5.**<br><br>$\dfrac{1}{4} \div 2 = $ _____ | **6.**<br><br>$\dfrac{1}{8} \div 4 = $ _____ |

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

# Session 7: Guided Practice (We Do)

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

➢ Restate each fraction multiplication problem based on your conceptual understanding.
*Example: 1 third equally divided 2 ways?*

➢ Multiply to find the answer to each division problem. Then, sketch the division problem to check your answer.

**1.**  $\dfrac{1}{3} \div 4 =$ _____

**2.**  $\dfrac{1}{8} \div 2 =$ _____

**3.**  $\dfrac{1}{6} \div 3 =$ _____

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

**Learning Target:** I will divide a unit fraction by a whole number
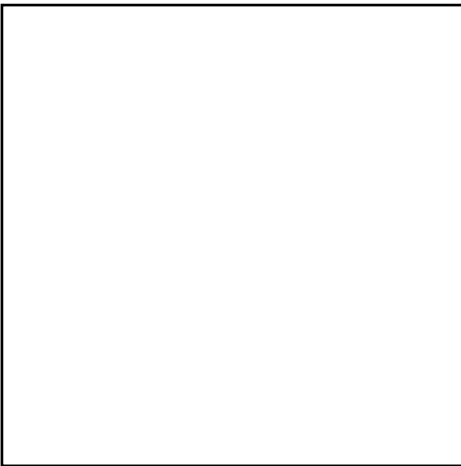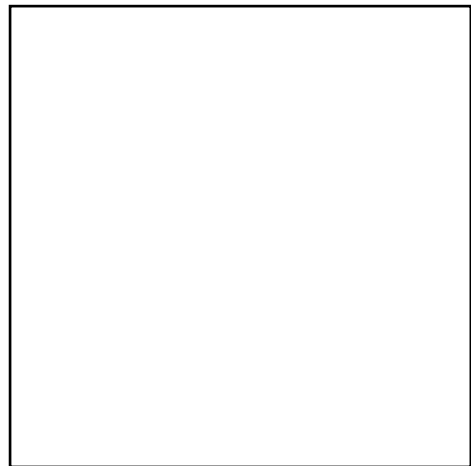
# Session 7: Guided Practice (We Do - Continued)

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

➢ 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.**   $\dfrac{1}{8} \div 3 =$ _____

**6.**   $\dfrac{1}{4} \div 4 =$ _____

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

**8.**   $\dfrac{1}{6} \div 3 =$ _____

# Session 7: Self-Reflection

6<sup>th</sup> Grade - Readiness Standard 6 - 5.NF.7a

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

Briefly discuss student responses:

> What did I learn today about dividing a unit fraction by a whole number?


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

# Quick Check - Form G

6th Grade - Readiness Standard 6 - 5.NF.7a

Name_____ Date_____

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

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

| | |
|---|---|
| **1.** $\frac{1}{5} \div 2 = $ _____ | **2.** $\frac{1}{4} \div 5 = $ _____ |
| **3.** $\frac{1}{7} \div 4 = $ _____ | **4.** $\frac{1}{10} \div 2 = $ _____ |
| **5.** $\frac{1}{5} \div 10 = $ _____ | **6.** $\frac{1}{9} \div 3 = $ _____ |

Name _____     Date _____

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

# Session 8:  Guided Practice  (We Do)

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

➢ Restate each fraction multiplication problem based on your conceptual understanding.
   *Example:  1 third equally divided 2 ways?*

➢ Multiply to find the answer to each division problem.  Then, sketch the division problem to check your answer.

**1.**     $\frac{1}{4}$  ÷  2  =  _____

**2.**     $\frac{1}{5}$  ÷  3  =  _____

**3.**     $\frac{1}{6}$  ÷  4  =  _____

**4.**     $\frac{1}{7}$  ÷  5  =  _____

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

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

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

> 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.**    $\frac{1}{6} \div 4 =$ _____

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

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

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

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

Briefly discuss student responses:

➢ What did I learn today about dividing a unit fraction by a whole number?

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

Name_____ Date_____

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

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

| | |
|---|---|
| **1.** <br><br> $\dfrac{1}{2} \div 6 = $ _____ | **2.** <br><br> $\dfrac{1}{5} \div 3 = $ _____ |
| **3.** <br><br> $\dfrac{1}{8} \div 9 = $ _____ | **4.** <br><br> $\dfrac{1}{6} \div 8 = $ _____ |
| **5.** <br><br> $\dfrac{1}{4} \div 6 = $ _____ | **6.** <br><br> $\dfrac{1}{2} \div 10 = $ _____ |

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

**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
  o Take a card from the row of face down **Problem** cards and turn it face up
  o 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.

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

# Independent Practice: Division Match-up!
## *(Recording Sheet)*

| | |
|---|---|
| | |
| | |
| | |
| | |

# Problem Cards (Set A₁ and A₂)

6th Grade - Readiness Standard 6 - 5.NF.7a

**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 A₁ | | | |
|---|---|---|---|
| $\frac{1}{2} \div 2$ <br> Set A₁ | $\frac{1}{2} \div 3$ <br> Set A₁ | $\frac{1}{2} \div 4$ <br> Set A₁ | $\frac{1}{2} \div 5$ <br> Set A₁ |
| $\frac{1}{3} \div 6$ <br> Set A₁ | $\frac{1}{3} \div 3$ <br> Set A₁ | $\frac{1}{3} \div 4$ <br> Set A₁ | $\frac{1}{3} \div 5$ <br> Set A₁ |
| $\frac{1}{4} \div 6$ <br> Set A₁ | $\frac{1}{4} \div 7$ <br> Set A₁ | | |

| Set A₂ | | | |
|---|---|---|---|
| $\frac{1}{2} \div 2$ <br> Set A₂ | $\frac{1}{2} \div 3$ <br> Set A₂ | $\frac{1}{2} \div 4$ <br> Set A₂ | $\frac{1}{2} \div 5$ <br> Set A₂ |
| $\frac{1}{3} \div 6$ <br> Set A₂ | $\frac{1}{3} \div 3$ <br> Set A₂ | $\frac{1}{3} \div 4$ <br> Set A₂ | $\frac{1}{3} \div 5$ <br> Set A₂ |
| $\frac{1}{4} \div 6$ <br> Set A₂ | $\frac{1}{4} \div 7$ <br> Set A₂ | | |

# Answer Cards  (Set A₁ and A₂)

6<sup>th</sup> Grade - Readiness Standard 6 - 5.NF.7a

**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 A₁**

| | | | |
|---|---|---|---|
| $\frac{1}{4}$ <br> *Set A₁* | $\frac{1}{6}$ <br> *Set A₁* | $\frac{1}{8}$ <br> *Set A₁* | $\frac{1}{10}$ <br> *Set A₁* |
| $\frac{1}{18}$ <br> *Set A₁* | $\frac{1}{9}$ <br> *Set A₁* | $\frac{1}{12}$ <br> *Set A₁* | $\frac{1}{15}$ <br> *Set A₁* |
| $\frac{1}{24}$ <br> *Set A₁* | $\frac{1}{28}$ <br> *Set A₁* | | |

**Set A₂**

| | | | |
|---|---|---|---|
| $\frac{1}{4}$ <br> *Set A₂* | $\frac{1}{6}$ <br> *Set A₂* | $\frac{1}{8}$ <br> *Set A₂* | $\frac{1}{10}$ <br> *Set A₂* |
| $\frac{1}{18}$ <br> *Set A₂* | $\frac{1}{9}$ <br> *Set A₂* | $\frac{1}{12}$ <br> *Set A₂* | $\frac{1}{15}$ <br> *Set A₂* |
| $\frac{1}{24}$ <br> *Set A₂* | $\frac{1}{28}$ <br> *Set A₂* | | |

# Problem Cards (Set B₁ and B₂)

6th Grade - Readiness Standard 6 - 5.NF.7a

**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 B₁** | $\frac{1}{6} \div 2$ <br> Set B₁ | $\frac{1}{6} \div 3$ <br> Set B₁ | $\frac{1}{6} \div 4$ <br> Set B₁ | $\frac{1}{7} \div 2$ <br> Set B₁ |
| | $\frac{1}{7} \div 3$ <br> Set B₁ | $\frac{1}{7} \div 4$ <br> Set B₁ | $\frac{1}{8} \div 2$ <br> Set B₁ | $\frac{1}{8} \div 5$ <br> Set B₁ |
| | $\frac{1}{8} \div 4$ <br> Set B₁ | $\frac{1}{9} \div 3$ <br> Set B₁ | | |
| **Set B₂** | $\frac{1}{6} \div 2$ <br> Set B₂ | $\frac{1}{6} \div 3$ <br> Set B₂ | $\frac{1}{6} \div 4$ <br> Set B₂ | $\frac{1}{7} \div 2$ <br> Set B₂ |
| | $\frac{1}{7} \div 3$ <br> Set B₂ | $\frac{1}{7} \div 4$ <br> Set B₂ | $\frac{1}{8} \div 2$ <br> Set B₂ | $\frac{1}{8} \div 5$ <br> Set B₂ |
| | $\frac{1}{8} \div 4$ <br> Set B₂ | $\frac{1}{9} \div 3$ <br> Set B₂ | | |

# Answer Cards  (Set B₁ and B₂)

6<sup>th</sup> Grade - Readiness Standard 6 - 5.NF.7a

**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 B₁**

| | | | |
|---|---|---|---|
| $\dfrac{1}{12}$ <br> Set B₁ | $\dfrac{1}{18}$ <br> Set B₁ | $\dfrac{1}{24}$ <br> Set B₁ | $\dfrac{1}{14}$ <br> Set B₁ |
| $\dfrac{1}{21}$ <br> Set B₁ | $\dfrac{1}{28}$ <br> Set B₁ | $\dfrac{1}{16}$ <br> Set B₁ | $\dfrac{1}{40}$ <br> Set B₁ |
| $\dfrac{1}{32}$ <br> Set B₁ | $\dfrac{1}{27}$ <br> Set B₁ | | |

**Set B₂**

| | | | |
|---|---|---|---|
| $\dfrac{1}{12}$ <br> Set B₂ | $\dfrac{1}{18}$ <br> Set B₂ | $\dfrac{1}{24}$ <br> Set B₂ | $\dfrac{1}{14}$ <br> Set B₂ |
| $\dfrac{1}{21}$ <br> Set B₂ | $\dfrac{1}{28}$ <br> Set B₂ | $\dfrac{1}{16}$ <br> Set B₂ | $\dfrac{1}{40}$ <br> Set B₂ |
| $\dfrac{1}{32}$ <br> Set B₂ | $\dfrac{1}{27}$ <br> Set B₂ | | |

# Problem Cards  (Set C₁ and C₂)

6th Grade - Readiness Standard 6 - 5.NF.7a

**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 C₁ | | | |
|---|---|---|---|
| $\frac{1}{6} \div 6$ <br> Set C₁ | $\frac{1}{7} \div 7$ <br> Set C₁ | $\frac{1}{8} \div 8$ <br> Set C₁ | $\frac{1}{9} \div 6$ <br> Set C₁ |
| $\frac{1}{6} \div 7$ <br> Set C₁ | $\frac{1}{7} \div 8$ <br> Set C₁ | $\frac{1}{8} \div 8$ <br> Set C₁ | $\frac{1}{9} \div 9$ <br> Set C₁ |
| $\frac{1}{7} \div 9$ <br> Set C₁ | $\frac{1}{8} \div 9$ <br> Set C₁ | | |

| Set C₂ | | | |
|---|---|---|---|
| $\frac{1}{6} \div 6$ <br> Set C₂ | $\frac{1}{7} \div 7$ <br> Set C₂ | $\frac{1}{8} \div 8$ <br> Set C₂ | $\frac{1}{9} \div 6$ <br> Set C₂ |
| $\frac{1}{6} \div 7$ <br> Set C₂ | $\frac{1}{7} \div 8$ <br> Set C₂ | $\frac{1}{8} \div 8$ <br> Set C₂ | $\frac{1}{9} \div 9$ <br> Set C₂ |
| $\frac{1}{7} \div 9$ <br> Set C₂ | $\frac{1}{8} \div 9$ <br> Set C₂ | | |

**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 $C_1$**

| | | | |
|---|---|---|---|
| $\frac{1}{36}$ <br> Set $C_1$ | $\frac{1}{49}$ <br> Set $C_1$ | $\frac{1}{48}$ <br> Set $C_1$ | $\frac{1}{54}$ <br> Set $C_1$ |
| $\frac{1}{42}$ <br> Set $C_1$ | $\frac{1}{56}$ <br> Set $C_1$ | $\frac{1}{64}$ <br> Set $C_1$ | $\frac{1}{81}$ <br> Set $C_1$ |
| $\frac{1}{63}$ <br> Set $C_1$ | $\frac{1}{72}$ <br> Set $C_1$ | | |

**Set $C_2$**

| | | | |
|---|---|---|---|
| $\frac{1}{36}$ <br> Set $C_2$ | $\frac{1}{49}$ <br> Set $C_2$ | $\frac{1}{48}$ <br> Set $C_2$ | $\frac{1}{54}$ <br> Set $C_2$ |
| $\frac{1}{42}$ <br> Set $C_2$ | $\frac{1}{56}$ <br> Set $C_2$ | $\frac{1}{64}$ <br> Set $C_2$ | $\frac{1}{81}$ <br> Set $C_2$ |
| $\frac{1}{63}$ <br> Set $C_2$ | $\frac{1}{72}$ <br> Set $C_2$ | | |

# Questions for Solving Word Problems

*Q₁*

### *What is the problem about?*

*Q₂*

### *What do I need to find?*

*Q₃*

### *What do I know?*

*Q₄*

### *What can I try?*

*Q₅*

### *Does my answer make sense?*

# Steps for Solving Word Problems

*Q₁.* *What is the problem about?*

*Q₂.* *What do I need to find?*

*Q₃.* *What do I know?*

*Q₄.* *What can I try?*

*Q₅.* *Does my answer make sense?*