

## $7^{\text {th }}$ Grade

# Tier 2 Intervention Lessons 

## Readiness Standard 1 - 6.NS. 1

Learning Target: I will multiply and divide fractions

Readiness for 6.EE.7: Solve 1-step algebraic equations
Session 1: Planning Guide ..... p. 4
Session 1: Re-engagement Lesson Resources ..... p. 5-10
Sessions 2 through 8: Planning Guide ..... p. 11
Sessions 2 through 8: Lesson Resources ..... p. 12-52
Independent Practice Activities: "Multiplication Match-up!" ..... p. 53-58
Classroom Poster: Questions for Solving Word Problems ..... p. 59
Tier 1 Support Classroom Poster: Steps for Solving Word Problems ..... p. 60

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

| 2. Instructional materials for students receiving interventions should <br> focus intensely on in-depth treatment of whole numbers in kindergar- <br> ten through grade 5 and on rational numbers in grades 4 through 8. <br> These materials should be selected by committee. | Low |
| :--- | :--- |
| 3. Instruction during the intervention should be explicit and systematic. <br> This includes providing models of proficient problem solving, verbal- <br> ization of thought processes, guided practice, corrective feedback, and <br> frequent cumulative review. | Strong |
| 4. Interventions should include instruction on solving word problems <br> that is based on common underlying structures. | Strong |
| 5. Intervention materials should include opportunities for students to <br> work with visual representations of mathematical ideas and interven- <br> tionists should be proficient in the use of visual representations of <br> mathematical ideas. | Moderate |
| 6. Interventions at all grade levels should devote about lo minutes in each <br> 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


Figure 1
(Dr. Douglas Fisher, Effective Use of the Gradual Release of Responsibility Model)

| Recommended Actions |  |
| :---: | :---: |
| Beginning (15 min.) | Review the readiness standard with the intervention group using the Guided Review <br> > Introduce the learning target and why it is important for future learning <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> > What did I remember about the learning target? <br> > What did I learn today about the learning target? <br> > How confident do I feel about doing the learning target on my own? |
| $\begin{aligned} & \text { End } \\ & \text { (10min.) } \end{aligned}$ | Assess each student's progress using Quick Check - Form A <br> Guide students to self-correct their Quick Check - Form A <br> Guide students to chart their progress by recording the date and Quick Check score <br> in their Growth Chart <br> Collect each student's Quick Check and Growth Chart |
| After | Create sub-groups to differentiate the middle of sessions 2 through 8 <br> - Group 1 - Include students who did not meet the learning goal <br> - Group 2 - Include students who met or exceeded the learning goal |

## $7^{\text {th }}$ Grade Fall Guided Review

Readiness Standard 1-6.NS. 1

Learning Target: I will multiply and divide fractions.

| 1. | Multiply: | $\frac{2}{3} \times \frac{5}{6}$ |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
|  |  |  |  |  |  |
|  |  | $\frac{7}{18}$ | $\frac{5}{9}$ |  |  |

## $7^{\text {th }}$ Grade Winter Guided Review

Readiness Standard 1-6.NS. 1

Name $\qquad$ Date $\qquad$

Learning Target: I will multiply and divide fractions.

| 1. Multiply: $\frac{5}{9}$ | $\frac{2}{5} \times \frac{3}{4}$ <br> $\frac{3}{10}$ | $\frac{5}{20}$ | $\bigcirc \frac{8}{15}$ |
| :---: | :---: | :---: | :---: |
| 2. Divide: $\frac{3}{4}$ | $\frac{2}{3} \div \frac{4}{5}$ <br> - $\frac{8}{15}$ | $\frac{5}{6}$ | $\text { ○ } \frac{6}{5}$ |
| 3. <br> Divide: $\frac{7}{16}$ | $\frac{5}{6} \div \frac{1}{3}$ | $\frac{2}{5}$ | - $\frac{5}{2}$ |

## $7^{\text {th }}$ Grade Spring Guided Review

Readiness Standard 1 - 6.NS. 1

Name $\qquad$ Date $\qquad$

Learning Target: I will multiply and divide fractions.
1.

- $\frac{5}{14}$
○ $\frac{2}{15}$
- $\frac{5}{45}$
- $\frac{10}{27}$

2. 

Divide:

$$
\frac{3}{5} \times \frac{2}{9}
$$

Multiply:

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

- $\frac{1}{2}$

○ $\frac{5}{7}$

- $\frac{9}{8}$
- $\frac{8}{9}$

3. 

Divide:

$$
\frac{4}{7} \div \frac{2}{5}
$$

$$
\bigcirc \frac{7}{10}
$$

- $\frac{10}{7}$
- $\frac{8}{35}$
- $\frac{1}{2}$

Learning Target: I will multiply and divide fractions

Briefly discuss student responses
$>$ What did I remember about multiplying and dividing fractions?

What did I learn today about multiplying and dividing fractions?

How confident do I feel about multiplying and dividing fractions on my own? (Thumbs up, down, or sideways)

## Quick Check - Form A

$7^{\text {th }}$ Grade - Readiness Standard 1-6.NS. 1
$\qquad$

Learning Target: I will multiply and divide fractions.

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


## Growth Chart

$7^{\text {th }}$ Grade - Readiness Standard 1-6.NS. 1
Name
Date $\qquad$

Learning Target: I will multiply and divide fractions.
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: |  |  |


| Recommended Actions |  |
| :---: | :---: |
| Beginning <br> (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 did not meet the learning goal on the previous Quick Check) <br> Model solving a word problem - "I do" <br> Guided Practice - "We do together/ You do together" <br> Session 2: Draw to see the differences between dividing and multiplying fractions. <br> Session 3: Use drawings to understand using common denominators to divide fractions <br> Session 4: Use common denominators and "multiply by the reciprocal" to divide fractions <br> Group 2: (Students who met the learning goal) <br> Independent practice - "You do alone" <br> Activity: Multiplication/Division Match-up! <br> (Look for additional activities in $6^{\text {th }}$ 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> - What did I learn today about multiplying and dividing fractions? <br> - How confident do I feel about multiplying and dividing fractions on my own? <br> (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> - 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> - Promote students who met the learning goal to group 2 <br> - 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 |

Session 2: Modeling (I Do)
$7^{\text {th }}$ Grade - Readiness Standard 1-6.NS. 1

Learning Target: I will multiply and divide fractions
Readiness for solving 1-step algebraic equations

Last night, Andy's family ate three fourths of a square pizza for dinner. If each piece was equal to one-eighth of the whole pizza, how many servings of the pizza were eaten? Session 2: Modeling (I Do - Visual Support)
$7^{\text {th }}$ Grade - Readiness Standard 1-6.NS. 1

Last night, Andy's family ate three fourths of a square pizza for dinner. If each piece was equal to one-eighth of the whole pizza, how many servings of the pizza were eaten?

## Draw 3 fourths of the whole

1 Whole Pizza


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

1 Whole Pizza
Separate the whole into eighths


1 Whole Pizza
Find how many eighths are in $\mathbf{3}$ fourths


Last night, Andy's family ate three fourths of a square pizza for dinner. If each piece was equal to one-eighth of the whole pizza, how many servings of the pizza were eaten?

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 Andy's family eating a square pizza for dinner.

Second, I need to determine what I need to find.
I need to find how many servings of pizza were eaten.

Third, I need to determine what I know.
I know that Andy's family ate 3 fourths of the pizza and each serving size is equal to 1 eighth of the whole.
Fourth, I need to figure out what I can try.
I am going to try drawing how much pizza they ate and each serving size on a square representing the whole pizza.
(Label the square and write the division problem.)
I will begin by highlighting 3 fourths of the pizza that was eaten.
(Use the guide for drawing fractions and draw lines separating the fourths
Then, outline three of the fourths using a yellow highlighter and label them.)
Now I will separate the pizza into serving sizes equal to 1 eighth by slicing each fourth in half using vertical lines.
(Use the guide for drawing fractions and draw lines with a blue highlighter to slice the fourths into eighths.)

I see that $\mathbf{3}$ fourths is equal to $\mathbf{6}$ eighths which is equal to $\mathbf{6}$ servings. (Point to each section and write $\frac{1}{8}$ inside each.)

It looks like 6 servings of pizza were eaten.

1 Whole Pizza

$\frac{3}{4}$ of the whole

Last, I need to make sure that my answer makes sense.
I found that Andy's family ate 6 servings of pizza. It makes sense because $I$ showed 3 fourths of the square pizza that they ate. Then, I drew eighths of the whole to see how many eighths were equal to $\mathbf{3}$ fourths.

## 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 thirds, fourths, sixths and eighths.
Rotate the square to use the side required for each problem.


Name
Date

Learning Target: I will multiply and divide fractions
7th Grade - Readiness Standard 1-6.NS. 1

## Session 2: Guided Practice (We Do)

We Do Together: (Teacher Actions)
> Restate each problem based on your conceptual understanding.
Problem 1: How many groups of 1 fourth are in 1 half?
Problem 2: 1 half of 1 fourth is equal to what part of the whole?
> Use the square guide to help you draw the fractions given in each problem.
1.

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


3. $\frac{3}{4} \div \frac{2}{8}=$

2.

4.

$\qquad$
$\qquad$

## Session 2: Guided Practice (We Do Continued)

You Do Together: (As a class, or in small groups)
> Take turns restating each problem.
> Use the square guide to help you draw the fractions given in each problem.
5.

6. $\frac{1}{2} \times \frac{1}{6}=$ $\qquad$

7. $\frac{2}{3} \div \frac{2}{6}=$
8.

$\qquad$
$\square$

$\qquad$
Learning Target: I will multiply and divide fractions

## Session 2: Guided Practice (We Do - Teacher Notes)

We Do Together: (Teacher Actions)
> Restate each problem based on your conceptual understanding.
Problem 1: How many groups of 1 fourth are in 1 half?
Problem 2: 1 half of 1 fourth is equal to what part of the whole?
$>$ Use the square guide to help you draw the fractions given in each problem.

How many groups of 1 fourth are in 1 half?
1 half of 1 fourth is 1 eighth of the whole
2.



How many groups of 2 eighths are in 3 fourths?
3.

$\frac{3}{4}$ of the whole
4.

3 fourths of 2 eighths is 3 sixteenths of the whole



Learning Target: I will multiply and divide fractions

Briefly discuss student responses
$>$ What did I learn today about multiplying and dividing fractions?
$>$ How confident do I feel about multiplying and dividing fractions on my own? (Thumbs up, down, or sideways)

## Quick Check - Form B

$7^{\text {th }}$ Grade - Readiness Standard 1-6.NS. 1
$\qquad$

Learning Target: I will multiply and divide fractions.

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


Session 3: Modeling (I Do)
$7^{\text {th }}$ Grade - Readiness Standard 1-6.NS. 1

Learning Target: I will multiply and divide fractions
Readiness for solving 1-step algebraic equations

Yesterday, Joe's family ate three-fourths of a square cake for dessert. If each serving size was equal to three-eighths of the whole cake, how many servings of the cake were eaten?

Session 3: Modeling (I Do - Visual Support)
$7^{\text {th }}$ Grade - Readiness Standard 1-6.NS. 1

Yesterday, Joe's family ate three-fourths of a square cake for dessert. If each serving size was equal to three-eighths of the whole cake, how many servings of the cake were eaten?

$$
\begin{aligned}
& \frac{6}{8} \div \frac{3}{8}=2 \text { groups } \\
& \frac{3}{4} \div \frac{3}{8}=\frac{2}{2}
\end{aligned}
$$



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

$7^{\text {th }}$ Grade - Readiness Standard 1 - 6.NS. 1

Learning Target: I will multiply and divide fractions
Readiness for solving 1-step algebraic equations

Yesterday, Joe's family ate three-fourths of a square cake for dessert. If each serving size was equal to three-eighths of the whole cake, how many servings of the cake were eaten?

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 Joe's family eating a square cake.
Second, I need to determine what I need to find.
I need to find how many servings of cake were eaten.

Third, I need to determine what I know.
I know that Joe's family ate $\mathbf{3}$ fourths of the cake and each serving size is equal to $\mathbf{3}$ eighths of the whole.

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

I am going to try drawing how much cake they ate along with each serving size to see how many $\mathbf{3}$ eighths servings are in 3 fourths of the cake.
(Point to the square on the "Modeling" page and write the division problem above.)
I will begin by highlighting the $\mathbf{3}$ fourths of the cake that was eaten.
(Draw 3 vertical lines, outline 3 fourths using a yellow highlighter and label it " $\frac{3}{4}$ of the whole".)


Now I will separate the cake into serving sizes equal to 3 eighths by slicing each fourth into 2 equal parts.
(Draw 4 vertical lines to slice each fourth into eighths and label each section.)
I see that $\mathbf{3}$ fourths is equal to 6 eighths, so I can rewrite the division problem using 8 as a common denominator.
(Write $\frac{6}{8} \div \frac{3}{8}$ above the original problem.)


And, $\mathbf{6}$ eighths divided by $\mathbf{3}$ eighths is equal to $\mathbf{2}$ groups of $\mathbf{3}$ eighths.
(Use a blue highlighter to separate 2 groups of 3 eighths in the drawing and write the answer.)
Last, I need to make sure that my answer makes sense.
I found that dividing numerators when the denominators are common will tell me how many groups make up the original fractional part. It makes sense because when fractions have common denominators, they have equivalent parts. And when you divide numbers with similar units, all you have to know is how many parts you have and how many parts make up one group...for example... 6 eighths divided by $\mathbf{3}$ eighths is equal to $\mathbf{2}$ eighths in each group.
$\qquad$

## Session 3: Guided Practice (We Do)

We Do Together: (Teacher Actions)
> Rewrite and solve each problem using common denominators.
> Use an area model to verify each answer.

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

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

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

4. $\frac{2}{3} \div \frac{4}{9}=$ $\qquad$
$\qquad$

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

You Do Together: (As a class, or in small groups)
> Take turns leading using common denominators to divide.
> Use an area model to verify each answer.
5. $\frac{3}{4} \div \frac{1}{8}=$

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

7.

$$
\frac{3}{4} \div \frac{5}{8}=
$$


8.


$\qquad$

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

We Do Together: (Teacher Actions)
> Rewrite and solve each problem using common denominators. Then, use an area model to verify each answer.
$\frac{3}{6} \div \frac{1}{6}=3$ groups of 1 sixth
1.


$$
\frac{6}{8} \div \frac{3}{8}=2 \text { groups of } 3 \text { eighths }
$$

3. 

$\frac{3}{4} \div \frac{3}{8}=2$

$\frac{3}{4}$ of the whole
2.

$$
\frac{4}{8} \div \frac{3}{8}=1 \frac{1}{3} \text { groups of } 3
$$



4.

$$
\frac{2}{3} \div \frac{4}{9}=1 \frac{1}{2}
$$

$$
\frac{6}{9} \div \frac{4}{9}=1 \frac{1}{2} \text { groups of } 4 \text { ninths }
$$



Learning Target: I will multiply and divide fractions

Briefly discuss student responses
$>$ What did I learn today about multiplying and dividing fractions?
$>$ How confident do I feel about multiplying and dividing fractions on my own? (Thumbs up, down, or sideways)

## Quick Check - Form C

$7^{\text {th }}$ Grade - Readiness Standard 1-6.NS. 1
$\qquad$

Learning Target: I will multiply and divide fractions.

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


Levi showed his dad how to solve $\frac{\mathbf{3}}{\mathbf{4}} \div \frac{\mathbf{2}}{\mathbf{8}}$ using the common denominator method. His dad appreciated how it worked and said, "When I was your age, we were taught a multiplication strategy to divide fractions! My teachers taught us to rewrite fraction division problems as multiplication by the reciprocal. And, we would have solved the problem as $\frac{\mathbf{3}}{4} \times \frac{8}{2}$."

Verify that the answer to $\frac{\mathbf{3}}{\mathbf{4}} \times \frac{\mathbf{8}}{\mathbf{2}}$ is the same as Levi's answer to $\frac{\mathbf{3}}{\mathbf{4}} \div \frac{\mathbf{2}}{\mathbf{8}}$.

$$
\frac{3}{4}{ }_{\times 2}^{\times 2} \div \frac{2}{8}=\frac{6}{8} \div \frac{2}{8}=\frac{6 \div 2}{8 \div 8}=\frac{3}{1}=3
$$

Levi showed his dad how to solve $\frac{\mathbf{3}}{\mathbf{4}} \div \frac{\mathbf{2}}{\mathbf{8}}$ using the common denominator method. His dad appreciated how it worked and said, "When I was your age, we were taught a multiplication strategy to divide fractions! My teachers taught us to rewrite fraction division problems as multiplication by the reciprocal. And, we would have solved the problem as $\frac{\mathbf{3}}{4} \times \frac{8}{2}$."

Verify that the answer to $\frac{\mathbf{3}}{\mathbf{4}} \times \frac{\mathbf{8}}{\mathbf{2}}$ is the same as Levi's answer to $\frac{\mathbf{3}}{\mathbf{4}} \div \frac{\mathbf{2}}{\mathbf{8}}$.

$$
\frac{3}{4}_{\times 2}^{\times 2} \div \frac{2}{8}=\frac{6}{8} \div \frac{2}{8}=\frac{6 \div 2}{8 \div 8}=\frac{3}{1}=3
$$

$$
\frac{3}{4} \times \frac{8}{2}=\frac{3 \times 8}{4 \times 2}=\frac{24}{8}=\frac{3}{1}=3
$$

Learning Target: I will multiply and divide fractions
Readiness for solving 1-step algebraic equations
Levi showed his dad how to solve $\frac{\mathbf{3}}{\mathbf{4}} \div \frac{\mathbf{2}}{\mathbf{8}}$ using the common denominator method. His dad appreciated how it worked and said, "When I was your age, we were taught a multiplication strategy to divide fractions! My teachers taught us to rewrite fraction division problems as multiplication by the reciprocal. And, we would have solved the problem as $\frac{3}{4} \times \frac{8}{2}$."
Verify that the answer to $\frac{\mathbf{3}}{4} \times \frac{8}{2}$ is the same as Levi's answer to $\frac{\mathbf{3}}{\mathbf{4}} \div \frac{\mathbf{2}}{\mathbf{8}}$.
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 Levi's dad sharing how he was taught to divide by a fraction.

Second, I need to determine what I need to find.
I need to find if the answer to $\frac{3}{4} \times \frac{8}{2}$ is the same as Levi's answer to $\frac{3}{4} \div \frac{2}{8}$.

Third, I need to determine what I know.
I know that Levi found that $\mathbf{3}$ fourths divided by 2 eighths is equal to 3.
Fourth, I need to figure out what I can try.
I am going to try using Levi's dad's multiplication strategy to see if I get the same answer.
The reciprocal of $\frac{2}{8}$ is $\frac{8}{2}$, so I need to multiply $\frac{3}{4}$ by $\frac{8}{2}$.
(Write the new multiplication problem below the division problem.)
And, to find 3 fourths of 8 halves, I will multiply the denominators to find the size of the new fractional parts. Similarly, I will multiply the numerators to find how many fractional parts I have.

4 times 2 is equal to 8 (Write " $4 \times 2$ ", " $=$ " and " 8 " in the denominators.)
3 times 8 is equal to 24 (Write " $3 \times 8$ " and " 24 " in the numerators.)
Since 8 is a factor of 24 , we can simplify the numerator and denominator by $\mathbf{3} . . .8$ times $\mathbf{3}$ is equal to 24
(Write $8 \times 3$ by the numerator)
And, 8 times 1 is equal to 8
(Write $8 \times 1$ by the denominator)
The factors of 8 cancel out each other leaving me with 3 in the numerator and 1 in the denominator, which is equal to 3.
(Write "= 3 " as the answer.)

$$
\frac{3}{4} \times \frac{8}{2}=\frac{3 \times 8}{4 \times 2}=\frac{24}{8}=\frac{3}{8 \times 3}=3
$$

Last, I need to make sure that my answer makes sense.
I found that Levi's dad's method gave the same answer as Levi's. I am not sure why it gave the same answer, but let's see if the "multiply by the reciprocal" method works for more than one problem.
$\qquad$
Learning Target: I will multiply and divide fractions

## Session 4: Guided Practice (We Do)

We Do Together: (Teacher Actions)
> Solve each problem using Levi's and his dad's methods.

|  | Divide Using Common Denominators | Multiply by the Reciprocal |
| :---: | :---: | :---: |
| 1. |  |  |
| $\frac{1}{2} \div \frac{1}{6}$ |  |  |
| 2. |  |  |
| $\frac{3}{8} \div \frac{1}{2}$ |  |  |
| 3. |  |  |
| $\frac{3}{4} \div \frac{3}{8}$ |  |  |
| 4. |  |  |
| $\frac{2}{3} \div \frac{4}{9}$ |  |  |

$\qquad$

## Session 4: Guided Practice (We Do)

We Do Together: (Teacher Actions)
> Solve each problem using Levi's and his dad's methods.

|  | Divide Using Common Denominators | Multiply by the Reciprocal |
| :---: | :---: | :---: |
| 5. |  |  |
| $\frac{3}{4} \div \frac{1}{8}$ |  |  |
| 6. |  |  |
| $\frac{4}{9} \div \frac{2}{3}$ |  |  |
| 7. |  |  |
| $\frac{3}{4} \div \frac{5}{8}$ |  |  |
| 8. |  |  |
| $\frac{2}{3} \div \frac{2}{6}$ |  |  |

$\qquad$

## Session 4: Guided Practice (We Do - Teacher Notes)

We Do Together: (Teacher Actions)
> Solve each problem using Levi's and his dad's methods.

|  | Divide Using Common Denominators | Multiply by the Reciprocal |
| :---: | :---: | :---: |
| 1. $\frac{1}{2} \div \frac{1}{6}$ | $\frac{1}{2} \div \frac{1}{6}=\frac{3}{6} \div \frac{1}{6}=\frac{3 \div 1}{6 \div 6}=\frac{3}{1}=3$ | $\frac{1}{2} \times \frac{6}{1}=\frac{1 \times 6}{2 \times 1}=\frac{6}{2}=\frac{3}{1}=3$ |
| 2. $\frac{3}{8} \div \frac{1}{2}$ | $\frac{3}{8} \div \frac{1}{2}^{x 4}=\frac{3}{8} \div \frac{4}{8}=\frac{3 \div 4}{8 \div 8}=\frac{\frac{3}{4}}{1}=\frac{3}{4}$ | $\frac{3}{8} \times \frac{2}{1}=\frac{3 \times 2}{8 \times 1}=\frac{6}{8} \pi_{2 \times 4}^{2 \times 3}=\frac{3}{4}$ |
| 3. $\frac{3}{4} \div \frac{3}{8}$ | $\frac{3}{4} \div \frac{3}{x 2} \div \frac{3}{8}=\frac{6}{8} \div \frac{3}{8}=\frac{6 \div 3}{8 \div 8}=\frac{2}{1}=2$ | $\frac{3}{4} \times \frac{8}{3}=\frac{3 \times 8}{4 \times 3}=\frac{24^{12 \times 2}}{12}=\frac{2}{1}=2$ |
| 4. $\frac{2}{3} \div \frac{4}{9}$ | $\begin{array}{r} \frac{2}{3} \div \frac{4}{9}=\frac{6}{9} \div \frac{4}{9}=\frac{6 \div 4}{9 \div 9}=\frac{\frac{6}{4}}{1}= \\ \frac{6}{4}=1 \frac{2}{4}=1 \frac{1}{2} \end{array}$ | $\frac{2}{3} \times \frac{9}{4}=\frac{2 \times 9}{3 \times 4}=\frac{18}{12}=\frac{3}{2 \times 3}=1 \frac{1}{2}$ |

Learning Target: I will multiply and divide fractions

Briefly discuss student responses
$>$ What did I learn today about multiplying and dividing fractions?
$>$ How confident do I feel about multiplying and dividing fractions on my own? (Thumbs up, down, or sideways)
$\qquad$

Learning Target: I will multiply and divide fractions.

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

$\qquad$

## Session 5: Guided Practice (We Do)

We Do Together: (Teacher Actions)
> Rewrite and solve each problem using common denominators.
> Use an area model to verify each answer.

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

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

3. $\frac{3}{4} \div \frac{5}{8}=$

4. 


$\qquad$


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

You Do Together: (As a class, or in small groups)
> Take turns leading using common denominators to divide.
> Use an area model to verify each answer.
5. $\frac{3}{4} \div \frac{3}{8}=$

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

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

8.

$\qquad$


Learning Target: I will multiply and divide fractions

Briefly discuss student responses
$>$ What did I learn today about multiplying and dividing fractions?
$>$ How confident do I feel about multiplying and dividing fractions on my own? (Thumbs up, down, or sideways)

## Quick Check - Form E

$7^{\text {th }}$ Grade - Readiness Standard 1-6.NS. 1

Name
Date $\qquad$

Learning Target: I will multiply and divide fractions.

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

$\qquad$

## Session 6: Guided Practice (We Do)

We Do Together: (Teacher Actions)
> Rewrite and solve each problem using common denominators.
> Use an area model to verify each answer.

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

2. 

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

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

4.

$\qquad$

$\qquad$

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

You Do Together: (As a class, or in small groups)
> Take turns leading using common denominators to divide.
> Use an area model to verify each answer.
5. $\frac{3}{4} \div \frac{1}{2}=$

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

7.

$$
\frac{8}{9} \div \frac{2}{3}=
$$

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


Learning Target: I will multiply and divide fractions

Briefly discuss student responses
> What did I learn today about multiplying and dividing fractions?
$>$ How confident do I feel about multiplying and dividing fractions on my own? (Thumbs up, down, or sideways)

## Quick Check - Form F

$7^{\text {th }}$ Grade - Readiness Standard 1 - 6.NS. 1

Name
Date $\qquad$

Learning Target: I will multiply and divide fractions.

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

$\qquad$

## Session 7: Guided Practice (We Do)

We Do Together: (Teacher Actions)
> Solve each problem using Levi's and his dad's methods.

|  | Divide Using Common Denominators | Multiply by the Reciprocal |
| :--- | :--- | :--- |
| $\frac{1}{2} \div \frac{1}{8}$ |  |  |
| $\frac{7}{10} \div \frac{1}{2}$ |  |  |
| $\frac{1}{4} \div \frac{3}{12}$ |  |  |
| $\frac{2}{3} \div \frac{2}{15}$ |  |  |
| 4. |  |  |

$\qquad$

## Session 7: Guided Practice (We Do)

We Do Together: (Teacher Actions)
> Solve each problem using Levi's and his dad's methods.

|  | Divide Using Common Denominators | Multiply by the Reciprocal |
| :--- | :--- | :--- |
| $\frac{2}{3} \div \frac{1}{12}$ |  |  |
| $\frac{7}{9} \div \frac{1}{3}$ |  |  |
| $\mathbf{7 .}$ |  |  |
| $\frac{3}{4} \div \frac{1}{8}$ |  |  |
| 8. |  |  |

Learning Target: I will multiply and divide fractions

Briefly discuss student responses
$>$ What did I learn today about multiplying and dividing fractions?
$>$ How confident do I feel about multiplying and dividing fractions on my own? (Thumbs up, down, or sideways)

## Quick Check - Form G

$7^{\text {th }}$ Grade - Readiness Standard 1-6.NS. 1

Name
Date $\qquad$

Learning Target: I will multiply and divide fractions.

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

$\qquad$

## Session 8: Guided Practice (We Do)

We Do Together: (Teacher Actions)
> Solve each problem using Levi's and his dad's methods.

|  | Divide Using Common Denominators | Multiply by the Reciprocal |
| :--- | :--- | :--- |
| $\frac{1}{3} \div \frac{1}{6}$ |  |  |
| $\frac{3}{10} \div \frac{1}{2}$ |  |  |
| 2. |  |  |
| $\frac{3}{4} \div \frac{5}{8}$ |  |  |
| 4. |  |  |

$\qquad$

## Session 8: Guided Practice (We Do)

We Do Together: (Teacher Actions)
> Solve each problem using Levi's and his dad's methods.

|  | Divide Using Common Denominators | Multiply by the Reciprocal |
| :--- | :--- | :--- |
| $\frac{3}{4} \div \frac{4}{8}$ |  |  |
| $\frac{7}{9} \div \frac{2}{3}$ |  |  |
| $\mathbf{7 .}$ |  |  |
| $\frac{3}{4} \div \frac{7}{8}$ |  |  |
| 8. |  |  |

Learning Target: I will multiply and divide fractions

Briefly discuss student responses
$>$ What did I learn today about multiplying and dividing fractions?
$>$ How confident do I feel about multiplying and dividing fractions on my own? (Thumbs up, down, or sideways)

## Quick Check - Form H

$7^{\text {th }}$ Grade - Readiness Standard 1-6.NS. 1
$\qquad$

Learning Target: I will multiply and divide fractions.

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


## Independent Practice (You Do)

$7^{\text {th }}$ Grade - Readiness Standard 1 - 6.NS. 1

Learning Target: I will multiply and divide fractions
Readiness for solving 1-step algebraic equations

## Title of Game: Play "Multiplication and 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
- And, find the answer in simplest form
> 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 $\qquad$ is equal to $\qquad$ ."
$>$ 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 $\qquad$
$\square$

## Problem Cards (Set A)

$7^{\text {th }}$ Grade - Readiness Standard 1 - 6.NS. 1

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.


## Answer Cards (Set A)

$7^{\text {th }}$ Grade - Readiness Standard 1-6.NS. 1

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.


## Problem Cards (Set B)

$7^{\text {th }}$ Grade - Readiness Standard 1-6.NS. 1

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.


## Answer Cards (Set B)

$7^{\text {th }}$ Grade - Readiness Standard 1-6.NS. 1

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.

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| $Q_{1}$ | What is the problem about? |
| :--- | :---: |
| $Q_{2}$ | What do I need to find? |
| $Q_{3}$ | What do I know? |
| $Q_{4}$ |  |
| $Q_{5}$ | Does my answer make sense? |

Steps for Solving Word Problems

| Q. What is the problem about? |
| :--- | :--- |
| Q. What do I need to find? |
| Q3. What do I know? |

$Q_{5}$. Does my answer make sense?

