5th Grade
Tier 2 Intervention Lessons

Readiness Standard 3 - 4.NF.2

Learning Target: I will compare two fractions with different numerators and different denominators

Readiness for 4.NF.3c: Add and subtract mixed numbers with like denominators

Table of Contents

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

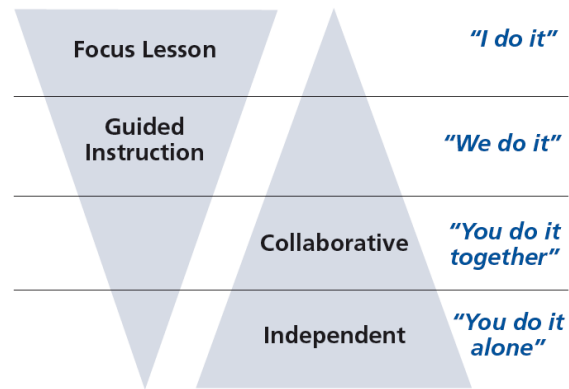|	
Focus Lesson	*"I do it"*
Guided Instruction	*"We do it"*
Collaborative	*"You do it together"*
Independent	*"You do it alone"*

Figure 1

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

Planning Guide: Session 1

5th Grade - Readiness Standard 3 - 4.NF.2

Learning Target: I will compare two fractions with different numerators and different denominators

Readiness for adding and subtracting mixed numbers with like denominators

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

5th Grade Fall Guided Review

DELTA
MATH
~ Rd PROGRAM

Name_____ Date_____

Learning Target: I will compare two fractions.

1.

Which sign compares the two fractions?

$$\frac{3}{5} \quad \underline{\quad} \quad \frac{4}{9}$$

◯   <   ◯   >   ◯   =

2.

Which sign compares the two fractions?

$$\frac{2}{3} \quad \underline{\quad} \quad \frac{6}{9}$$

◯   <   ◯   >   ◯   =

3.

Which sign compares the two fractions?

$$\frac{3}{4} \quad \underline{\quad} \quad \frac{5}{7}$$

◯   <   ◯   >   ◯   =

5th Grade Winter Guided Review

Name_____ Date_____

Learning Target: I will compare two fractions.

1.

Which sign compares the two fractions?

$$\frac{4}{5} \quad \rule{2cm}{0.4pt} \quad \frac{5}{9}$$

○ <   ○ >   ○ =

2.

Which sign compares the two fractions?

$$\frac{3}{4} \quad \rule{2cm}{0.4pt} \quad \frac{15}{20}$$

○ <   ○ >   ○ =

3.

Which sign compares the two fractions?

$$\frac{4}{7} \quad \rule{2cm}{0.4pt} \quad \frac{5}{9}$$

○ <   ○ >   ○ =

5th Grade Spring Guided Review

Readiness Standard 3 - 4.NF.2

Name_____ Date_____

Learning Target: I will compare two fractions.

1.

Which sign compares the two fractions?

$$\frac{2}{3} \quad \underline{\quad\quad} \quad \frac{3}{8}$$

○ <   ○ >   ○ =

2.

Which sign compares the two fractions?

$$\frac{2}{5} \quad \underline{\quad\quad} \quad \frac{8}{20}$$

○ <   ○ >   ○ =

3.

Which sign compares the two fractions?

$$\frac{3}{7} \quad \underline{\quad\quad} \quad \frac{4}{9}$$

○ <   ○ >   ○ =

Learning Target: I will compare two fractions with different numerators and different denominators

Briefly discuss student responses:

➢ What did I remember today about comparing fractions with different numerators and different denominators?

➢ What did I learn today about comparing fractions with different numerators and different denominators?

➢ How confident do I feel about comparing fractions with different numerators and different denominators on my own?
(Thumbs up, down, or sideways)

Quick Check - Form A

5th Grade - Readiness Standard 3 - 4.NF.2

Name_____ Date_____

Learning Target: I will compare two fractions.

Directions: Fill in the blank. (>, <, =)
(Work time: 5 minutes)

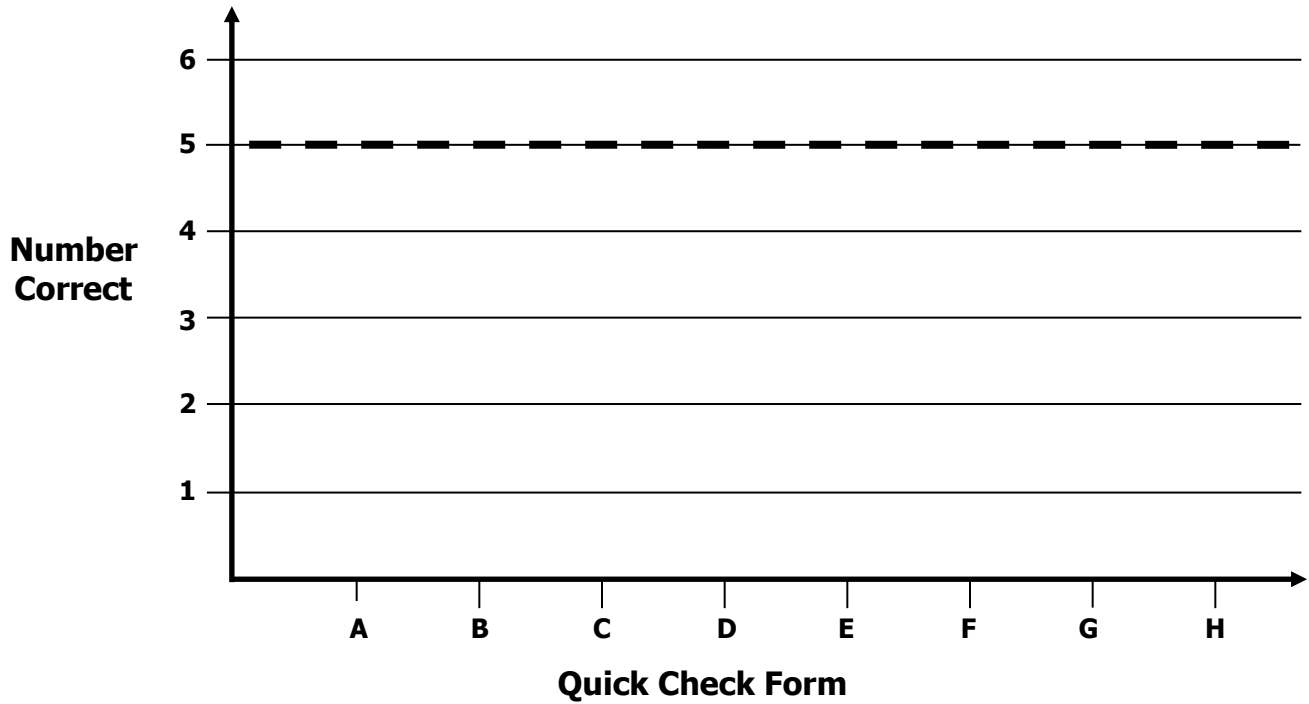|	
1. $\dfrac{2}{3}$ ——— $\dfrac{4}{5}$	**2.** $\dfrac{1}{4}$ ——— $\dfrac{4}{12}$
3. $\dfrac{3}{4}$ ——— $\dfrac{2}{7}$	**4.** $\dfrac{3}{5}$ ——— $\dfrac{5}{8}$
5. $\dfrac{1}{3}$ ——— $\dfrac{3}{9}$	**6.** $\dfrac{4}{6}$ ——— $\dfrac{3}{4}$

Growth Chart

5th Grade - Readiness Standard 3 - 4.NF.2

Name_____ Date_____

Learning Target: I will compare two 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:		

Planning Guide: Sessions 2 Through 8

5th Grade - Readiness Standard 3 - 4.NF.2

Learning Target: I will compare two fractions with different numerators and different denominators

Readiness for adding and subtracting mixed numbers with like denominators

<table>
<tr>
<td colspan="2" align="center">Recommended Actions</td>
</tr>
<tr>
<td>Beginning
(5 min.)</td>
<td colspan="2">
➢ Review the learning target with the whole group and ask each student to set a goal for today's learning
</td>
</tr>
<tr>
<td>Middle
(15 min.)</td>
<td>
Group 1: <i>(Students who <u>did not</u> meet the learning goal on the previous Quick Check)</i>

➢ Model solving a word problem – "I do"
➢ Guided Practice – "We do together/ You do together"

Session 2: Use fraction strips to compare fractions with different numerators/denominators
Session 3: Use number lines to compare fractions with different numerators/denominators
Session 4: Use common denominators to compare fractions with different numerators and denominators
</td>
<td>
Group 2: <i>(Students who met the learning goal)</i>

➢ Independent practice – "You do alone"

Activity: <i>"Whose Fraction is Greater?"</i>

<i>(Look for additional activities in 4th grade core instruction resources.)</i>
</td>
</tr>
<tr>
<td>End
(10 min.)</td>
<td colspan="2">
➢ Bring the students back together.
➢ Ask students to reflect on their progress towards the learning target
   o What did I learn today about comparing fractions with different numerators and denominators?
   o How confident do you feel about comparing fractions with different numerators and denominators on my own? (Thumbs up, down, or sideways)
➢ Assess each student's progress using the next Quick Check form
➢ Guide students to self-correct their Quick Check
➢ Guide students to chart their progress in their Growth Chart
   o If not using Delta Math lessons, record the activity in the table
➢ Collect each student's Quick Check and Growth Chart
</td>
</tr>
<tr>
<td>After</td>
<td colspan="2">
➢ Regroup students to differentiate the middle of sessions 3 through 8
   o Promote students who met the learning goal to group 2
   o Exit students who met the learning goal for a third time
➢ Problem solve with a team to plan additional support for students who did not exit
</td>
</tr>
</table>

Learning Target: I will compare two fractions with different numerators and different denominators

Readiness for adding and subtracting mixed numbers with like denominators

Chris and Maria ran as fast and far as they could before stopping to catch their breath. Chris ran five-eighths of a mile and Maria ran three-fourths of a mile. Who ran further before stopping to catch their breath?

Session 2: Modeling (I Do – Visual Support)

Learning Target: I will compare two fractions with different numerators and different denominators

Readiness for adding and subtracting mixed numbers with like denominators

Chris and Maria ran as fast and far as they could before stopping to catch their breath. Chris ran five-eighths of a mile and Maria ran three-fourths of a mile. Who ran further before stopping to catch their breath?

$$\frac{5}{8}$$

$$<$$

Less Than

$$\frac{3}{4}$$

Fold

1 Whole			
$\frac{1}{2}$			$\frac{1}{2}$
$\frac{1}{3}$		$\frac{1}{3}$	
$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	
$\frac{1}{8}$ $\frac{1}{8}$ $\frac{1}{8}$ $\frac{1}{8}$ $\frac{1}{8}$			

Folds

Fold

Session 2: Modeling (I Do - Teacher Notes)

5th Grade - Readiness Standard 3 - 4.NF.2

Learning Target: I will compare two fractions with different numerators and different denominators

Readiness for adding and subtracting mixed numbers with like denominators

Chris and Maria ran as fast and far as they could before stopping to catch their breath. Chris ran five-eighths of a mile and Maria ran three-fourths of a mile. Who ran further before stopping to catch their breath?
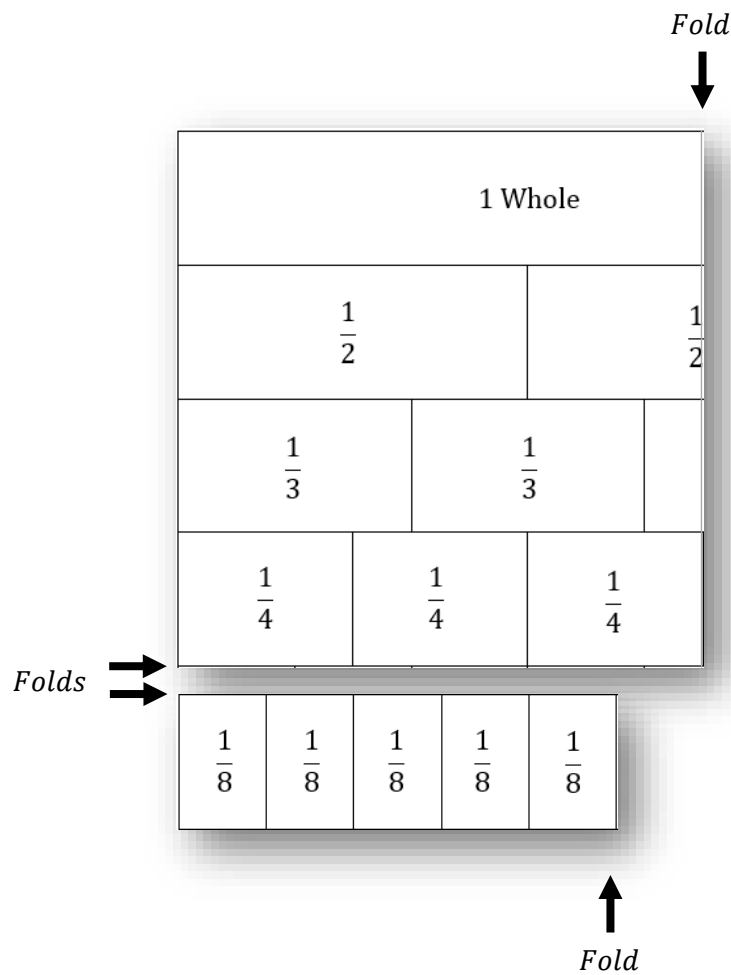
I am going to think aloud to model solving this problem.

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 Chris and Maria running as fast and far as they could before stopping to catch their breath.

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

I need to find who ran further.

Third, I need to determine what I know.

I know that Chris ran five-eighths of a mile and Maria ran three-fourths of a mile.

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

I am going to try using fraction strips to find who ran further.
(Hold up two sets of fraction strips)

Since I am comparing five-eighths of a mile to three-fourths of a mile, I am going to find fractions cards to set up the problem.
(Place the fraction cards on the "Modelling" page.)

Now, I will represent five-eighths of a mile using fraction strips by folding the template so that the "eighths" are visible as the bottom row…
then I will fold it again to show five-eighths by hiding one of the eighths.
(Fold the template twice so that three-fourths are visible at the bottom.)

Next, I will represent three-fourths by folding another fraction template so that three-fourths are visible as the top row…
(Fold the other template twice so that three sixths are visible at the top.)

I see that five-eighths of a mile is less than three-fourths.
(Point to the difference between the two lengths and place the "less-than" card between the fraction cards.)

Therefore, I Maria ran further than Chris.

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

I found that Maria ran further than Chris. It makes sense because I folded fraction strips to compare the fractional parts of a mile that were ran. I saw that five-eighths was less than three-fourths, so it seems reasonable that Maria ran further.
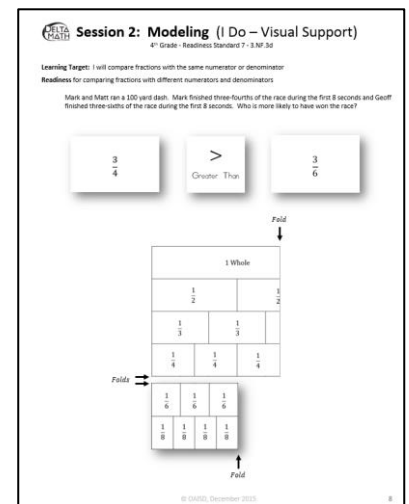
Looking for structure:

I can also show that five-eighths is less than three-fourths by finding an equivalent fraction with a common denominator.

When I unfold my first fraction template, I see that three-fourths is equal to six-eighths.
(Fold the template vertically to show three-fourths and six-eighths)

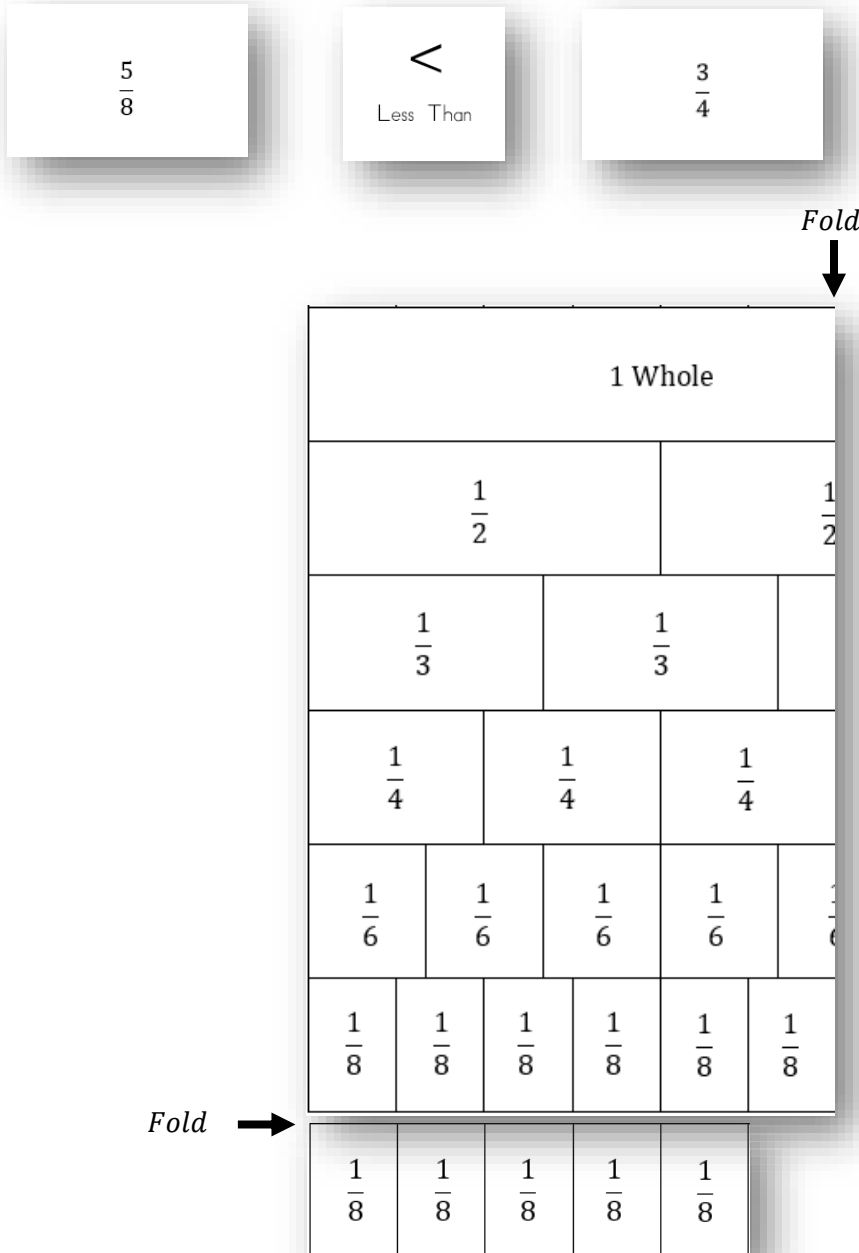Since these two fractions are equal, I can use six-eighths in place of three-fourths so that the two fractions we are comparing have the same size parts. Now, all I have to do is compare the number of parts for each fraction...5 is less than 6, so five-eighths is less than six-eighths.

$$\frac{5}{8} \qquad < \text{ Less Than} \qquad \frac{3}{4}$$

Fold

1 Whole		
$\frac{1}{2}$		$\frac{1}{2}$
$\frac{1}{3}$	$\frac{1}{3}$	
$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$
$\frac{1}{6}$ $\frac{1}{6}$	$\frac{1}{6}$ $\frac{1}{6}$	$\frac{1}{6}$
$\frac{1}{8}$ $\frac{1}{8}$ $\frac{1}{8}$	$\frac{1}{8}$ $\frac{1}{8}$ $\frac{1}{8}$	

Fold →

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

Learning Target: I will compare two fractions with different numerators and different denominators

Session 2: Guided Practice (We Do)

We Do Together: (Teacher Actions)

➤ Use fraction strips to find equivalent fractions with common denominators to compare fractions.

1. $\dfrac{3}{8}$ _____ $\dfrac{1}{2}$	**2.** $\dfrac{2}{4}$ _____ $\dfrac{4}{8}$
3. $\dfrac{2}{3}$ _____ $\dfrac{3}{6}$	**4.** $\dfrac{3}{4}$ _____ $\dfrac{1}{2}$

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

➤ Students take turns leading using fraction strips with common denominators to compare fractions.

5. $\dfrac{2}{8}$ _____ $\dfrac{1}{2}$	**6.** $\dfrac{2}{3}$ _____ $\dfrac{1}{2}$
7. $\dfrac{2}{6}$ _____ $\dfrac{1}{3}$	**8.** $\dfrac{3}{6}$ _____ $\dfrac{2}{3}$

Modeling & Guided Practice Cards

5th Grade - Readiness Standard 3 - 4.NF.2

$$\frac{3}{8} \quad \rule{2cm}{0.4pt} \quad \frac{1}{2}$$

$$\frac{2}{4} \quad \rule{2cm}{0.4pt} \quad \frac{4}{8}$$

$$\frac{2}{3} \quad \rule{2cm}{0.4pt} \quad \frac{3}{6}$$

$$\frac{3}{4} \quad \rule{2cm}{0.4pt} \quad \frac{1}{2}$$

$$\frac{2}{8} \quad \rule{2cm}{0.4pt} \quad \frac{1}{2}$$

$$\frac{2}{3} \quad \rule{2cm}{0.4pt} \quad \frac{1}{2}$$

$$\frac{2}{6} \quad \rule{2cm}{0.4pt} \quad \frac{1}{3}$$

$$\frac{3}{6} \quad \rule{2cm}{0.4pt} \quad \frac{2}{3}$$

$$\frac{5}{8} \quad \rule{2cm}{0.4pt} \quad \frac{3}{4}$$

Fraction Strips (4 Sets)

5th Grade - Readiness Standard 3 - 4.NF.2

Directions: Each student should receive two sets of strips...do not cut into individual strips. (See example on p. 9, *fold the fraction strips twice to show fractional parts of a whole.*)

1 Whole		1 Whole	
$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$

| $\frac{1}{3}$ | $\frac{1}{3}$ | $\frac{1}{3}$ | $\frac{1}{3}$ | $\frac{1}{3}$ | $\frac{1}{3}$ |

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

$\frac{1}{6}$ $\frac{1}{6}$ $\frac{1}{6}$ $\frac{1}{6}$ $\frac{1}{6}$ $\frac{1}{6}$ $\frac{1}{6}$ $\frac{1}{6}$ $\frac{1}{6}$ $\frac{1}{6}$ $\frac{1}{6}$ $\frac{1}{6}$

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

1 Whole		1 Whole	
$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$

| $\frac{1}{3}$ | $\frac{1}{3}$ | $\frac{1}{3}$ | $\frac{1}{3}$ | $\frac{1}{3}$ | $\frac{1}{3}$ |

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

$\frac{1}{6}$ $\frac{1}{6}$ $\frac{1}{6}$ $\frac{1}{6}$ $\frac{1}{6}$ $\frac{1}{6}$ $\frac{1}{6}$ $\frac{1}{6}$ $\frac{1}{6}$ $\frac{1}{6}$ $\frac{1}{6}$ $\frac{1}{6}$

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

Session 2: Self-Reflection

5th Grade - Readiness Standard 3 - 4.NF.2

Learning Target: I will compare two fractions with different numerators and different denominators

Briefly discuss student responses:

➢ What did I learn today about comparing fractions with different numerators and different denominators?

➢ How confident do I feel about comparing fractions with different numerators and different denominators on my own?
(Thumbs up, down, or sideways)

Name_____ Date_____

Learning Target: I will compare two fractions.

Directions: Fill in the blank. (>, <, =)
(Work time: 5 minutes)

1. $\dfrac{1}{3}$ —— $\dfrac{2}{7}$	**2.** $\dfrac{2}{3}$ —— $\dfrac{6}{12}$
3. $\dfrac{3}{5}$ —— $\dfrac{4}{7}$	**4.** $\dfrac{3}{4}$ —— $\dfrac{6}{8}$
5. $\dfrac{1}{5}$ —— $\dfrac{3}{10}$	**6.** $\dfrac{5}{6}$ —— $\dfrac{3}{4}$

Learning Target: I will compare two fractions with different numerators and different denominators

Readiness for adding and subtracting mixed numbers with like denominators

Tonight's weather forecast is predicting one-half of a foot of snow for Grand Rapids, Michigan and five-sixths of a foot for Holland. According to this forecast, which city should expect more snow?

```
←————|————————————————————————|————→
     0                        1
```

```
←————|————————————————————————|————→
     0                        1
```
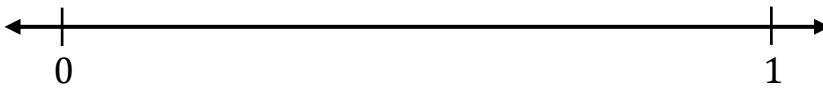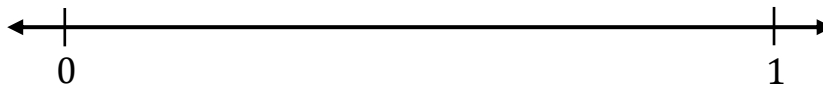
Session 3: Modeling (I Do – Visual Support)

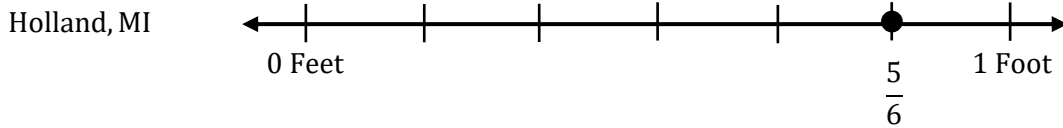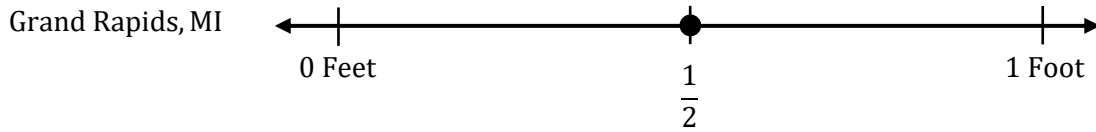### 5th Grade - Readiness Standard 3 - 4.NF.2

Learning Target: I will compare two fractions with different numerators and different denominators

Readiness for adding and subtracting mixed numbers with like denominators

Tonight's weather forecast is predicting one-half of a foot of snow for Grand Rapids, Michigan and five-sixths of a foot for Holland. According to this forecast, which city should expect more snow?

Snow Fall Predictions

Grand Rapids, MI

0 Feet $\frac{1}{2}$ 1 Foot

Holland, MI

0 Feet $\frac{5}{6}$ 1 Foot

Snow Fall Predictions

Grand Rapids, MI

0 Feet $\frac{1}{2} = \frac{3}{6}$ 1 Foot

Holland, MI

0 Feet $\frac{5}{6}$ 1 Foot

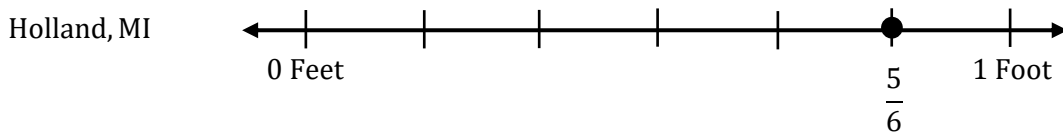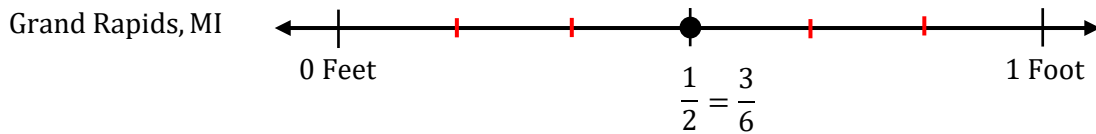**Learning Target:** I will compare two fractions with different numerators and different denominators

Readiness for adding and subtracting mixed numbers with like denominators

> Tonight's weather forecast is predicting one-half of a foot of snow for Grand Rapids, Michigan and five-sixths of a foot for Holland. According to this forecast, which city should expect more snow?

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 tonight's weather forecast.

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

I need to find which city is expecting more snow.

Third, I need to determine what I know.

I know that Grand Rapids, Michigan is expecting one-half of a foot of snow and Holland is expecting five-sixths of a foot of snow.

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

Snow Fall Predictions

Grand Rapids, MI
0 Feet $\frac{1}{2}$ 1 Foot

Holland, MI
0 Feet $\frac{5}{6}$ 1 Foot
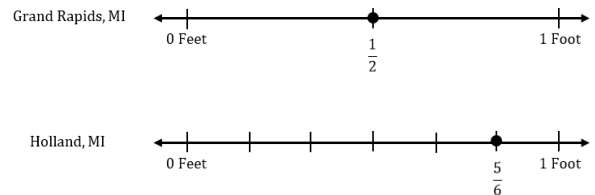
I am going to try using number lines to find common denominators.
(Label the first number line with the title "Grand Rapids, MI" and the second "Holland, MI".)

I will use the "halves" fraction strip to find one-half on the number line.
(Place the "halves" strip above the line and draw a vertical dash to separate each part. Then, draw a dot and write $\frac{1}{2}$ underneath it.)

I will use the "sixths" fraction strip to find five-sixths of a foot.
(Place the "sixths" strip above the line and draw vertical dashes to separate each part. Then, draw a dot and write $\frac{5}{6}$ underneath it.)

Five-sixths of a foot is located the distance five-sixths from zero, or one-sixth from 1.
(Draw the dot, then write $\frac{5}{6}$ underneath and label it "Holland, MI".)

I see that one-half of a foot is less than five-sixths because one-half is closer to zero than five-sixths. Therefore, Holland is expecting more snow than Grand Rapids.
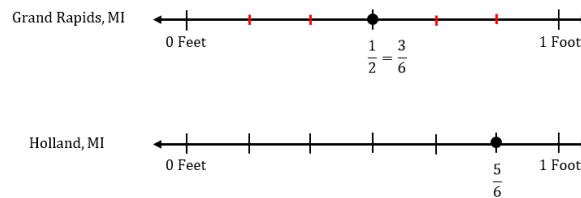(Point to the one-half on the number line.)

(Continued)

Learning Target: I will compare two fractions with different numerators and different denominators

Readiness for adding and subtracting mixed numbers with like denominators

---

<div style="border:1px solid black">

Snow Fall Predictions

Grand Rapids, MI

0 Feet $\frac{1}{2} = \frac{3}{6}$ 1 Foot

Holland, MI

0 Feet $\frac{5}{6}$ 1 Foot

Although I can compare two fractions visually, I can also do this by finding common denominators.

Anytime one denominator is a multiple of the other, since 2 times 3 is 6, I can break the smaller denominator into the same number of smaller parts.

If I separate each half into 3 equal sections using another color, I now have the whole broken into 6 equal sections.

(Draw vertical marks in red to make 6 equal sections and write the digit "6" in the denominator next to the $\frac{1}{2}$.)

And, the number of parts we have is now three.

(Point to the first 3 parts and write the digit "3" in the numerator next to the $\frac{1}{2}$.)

Now that I have two fractions with the same size parts, I can compare the number of parts represented in each numerator...five-sixths is greater than three-sixths.

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

I found that five-sixths is greater than one-half. It makes sense because I drew one-half and five-sixths on a number line and saw that five-sixths is further from zero than one-half. I also found common denominators to use fractions with the same size parts to make it easy to compare!

</div>

DELTA MATH
— RtI PROGRAM

Learning Target: I will compare two fractions with different numerators and different denominators

Session 3: Guided Practice (We Do)

We Do Together: (Teacher Actions)

➢   Use number lines to help you use common denominators to compare fractions.

Problem type A: One denominator is a multiple of the other.

1.

$\frac{3}{8}$ _____ $\frac{1}{2}$

2.

$\frac{2}{3}$ _____ $\frac{3}{6}$

Problem type B: One denominator is NOT a multiple of the other.

3.

$\frac{2}{3}$ _____ $\frac{1}{4}$

4.

$\frac{3}{4}$ _____ $\frac{4}{5}$

Learning Target: I will compare two fractions with different numerators and different denominators

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

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

➢ Students take turns leading to use number lines and common denominators to compare fractions.

Problem type A: One denominator is a multiple of the other.

5.

$\dfrac{5}{8}$ _____ $\dfrac{3}{4}$

6.

$\dfrac{1}{2}$ _____ $\dfrac{2}{6}$

Problem type B: One denominator is NOT a multiple of the other.

7.

$\dfrac{1}{3}$ _____ $\dfrac{2}{4}$

8.

$\dfrac{1}{2}$ _____ $\dfrac{2}{3}$

Learning Target: I will compare two fractions with different numerators and different denominators

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

We Do Together: (Teacher Actions)

➢ Use number lines to help you use common denominators to compare fractions.

Problem type A: One denominator is a multiple of the other.

1.

$$\frac{3}{8} \underline{\ <\ } \frac{1}{2}$$

$$\frac{3}{8} \ < \ \frac{4}{8}$$

Separate each half into 4 equal parts

0    $\frac{3}{8}$ 1

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

2.

$$\frac{2}{3} \underline{\ >\ } \frac{3}{6}$$

$$\frac{4}{6} \ > \ \frac{3}{6}$$

Separate each third into 2 equal parts

0    $\frac{2}{3} = \frac{4}{6}$ 1

0    $\frac{3}{6}$ 1

Problem type B: One denominator **is NOT** a multiple of the other.

3.

$$\frac{2}{3} \underline{\ >\ } \frac{1}{4}$$

$$\frac{8}{12} \ > \ \frac{3}{12}$$

Separate each third into 4 equal parts

0    $\frac{2}{3} = \frac{4}{6}$ 1

Separate each fourth into 3 equal parts

0    $\frac{1}{4} = \frac{3}{12}$ 1

4.

$$\frac{3}{4} \underline{\ <\ } \frac{4}{5}$$

$$\frac{15}{20} \ < \ \frac{16}{20}$$

Separate each fourth into 5 equal parts

0    $\frac{3}{4} = \frac{15}{20}$ 1

Separate each fifth into 4 equal parts

0    $\frac{4}{5} = \frac{16}{20}$ 1

Session 3: Self-Reflection

5th Grade - Readiness Standard 3 - 4.NF.2

Learning Target: I will compare two fractions with different numerators and different denominators

Briefly discuss student responses:

> ➢ What did I learn today about comparing fractions with different numerators and different denominators?

> ➢ How confident do I feel about comparing fractions with different numerators and different denominators on my own?
> *(Thumbs up, down, or sideways)*

5th Grade - Readiness Standard 3 - 4.NF.2

Name_____ Date_____

Learning Target: I will compare two fractions.

Directions: Fill in the blank. (>, <, =)
(Work time: 5 minutes)

1. $\dfrac{2}{5}$ —— $\dfrac{1}{3}$	**2.** $\dfrac{3}{4}$ —— $\dfrac{4}{12}$
3. $\dfrac{3}{5}$ —— $\dfrac{4}{7}$	**4.** $\dfrac{2}{3}$ —— $\dfrac{8}{12}$
5. $\dfrac{2}{3}$ —— $\dfrac{3}{9}$	**6.** $\dfrac{5}{6}$ —— $\dfrac{3}{4}$

Learning Target: I will compare two fractions with different numerators and different denominators

Readiness for adding and subtracting mixed numbers with like denominators

On the Delta Math readiness screener, Dominik chose ">" as the answer to the following question:

Which sign compares the two fractions:

$$\frac{5}{8} \underline{\hspace{1cm}} \frac{3}{4}$$

>	<	=

Is he correct? If not, what is the correct answer?

Session 4: Modeling (I Do – Teacher Notes)

5th Grade - Readiness Standard 3 - 4.NF.2

Learning Target: I will compare two fractions with different numerators and different denominators

Readiness for adding and subtracting mixed numbers with like denominators

On the Delta Math readiness screener, Dominik chose ">" as the answer to the following question "Which sign compares the two fractions:

$$\frac{5}{8} \underline{\hspace{1cm}} \frac{3}{4}$$

>	<	=

Is he correct? If not, what is the correct 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 Dominik answering a comparing fractions problem on a Delta Math readiness screener.**
Second, I need to determine what I need to find. **I need to find if Dominik chose the correct answer and if not, I need to find the correct answer.**
Third, I need to determine what I know. **I know that Dominik chose the greater-than sign.**

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

I am going to try finding common denominators to compare the fractions and see if Dominik's answer is correct.

$$\frac{5}{8} \underset{\rule{1cm}{0.4pt}}{<} \frac{3 \times 2}{4 \times 2} = \frac{6}{8}$$

Since one denominator is a multiple of the other, I can break the smaller denominator into the same number of parts as the other.

I need to double the number of fourths to get the same size parts as eighths.
(Write x 2 next to the denominator, 4)

And, since I had three-fourths, I need to double the three to find how many eighths are equal to three-fourths.
(Write x 2 next to the numerator, 3)

By multiplying the denominator and numerator by 2, I showed that three-fourths is equal to six-eighths.
(Write "= $\frac{6}{8}$ " next to the fraction three-fourths.)

And six-eighths is greater than five-eighths…so three-fourths is greater than five-eighths.

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

I found that Dominik did not choose the incorrect answer. It makes sense because I used common denominators to find that three-fourths is equal to six eighths so that I could compare two fractions that have parts that are the same size.

Learning Target: I will compare two fractions with different numerators and different denominators

Session 4: Guided Practice (We Do)

We Do Together: (Teacher Actions)

> Use common denominators to compare fractions. Then use number lines to check your work.

Problem type A: One denominator is a multiple of the other.

1.

$\frac{3}{8}$ _____ $\frac{1}{2}$

2.

$\frac{2}{3}$ _____ $\frac{3}{6}$

Problem type B: One denominator **is NOT** a multiple of the other.

3.

$\frac{2}{3}$ _____ $\frac{1}{4}$

4.

$\frac{3}{4}$ _____ $\frac{4}{5}$

Learning Target: I will compare two fractions with different numerators and different denominators

Session 4: Guided Practice (We Do - Continued)

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

➢ Students take turns leading to use common denominators to compare fractions.

Problem type A: One denominator is a multiple of the other.

5.

$\dfrac{3}{8}$ _____ $\dfrac{1}{4}$

6.

$\dfrac{1}{2}$ _____ $\dfrac{4}{6}$

Problem type B: One denominator **is NOT** a multiple of the other.

7.

$\dfrac{2}{3}$ _____ $\dfrac{2}{4}$

8.

$\dfrac{1}{4}$ _____ $\dfrac{2}{3}$

Learning Target: I will compare two fractions with different numerators and different denominators

Session 4: Guided Practice (We Do – Teacher Notes)

We Do Together: (Teacher Actions)

➢ Use common denominators to compare fractions. Then use number lines to check your work.

Problem type A: One denominator is a multiple of the other.

1.

Multiply each half by 4

$$\frac{3}{8} \; \underline{<} \; \frac{1 \times 4}{2 \times 4} = \frac{4}{8}$$

Three-eighths is less than four-eighths

Separate each half into 4 equal parts

$\frac{3}{8}$ at 0 and 1

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

2.

Multiply each third by 2

$$\frac{4}{6} = \frac{2 \times 2}{2 \times 3} \; \underline{>} \; \frac{3}{6}$$

Four-sixths is greater than three-sixths

Separate each third into 2 equal parts

$\frac{2}{3} = \frac{4}{6}$

$\frac{3}{6}$

Problem type B: One denominator **is NOT** a multiple of the other.

3.

Multiply each third by 4

Multiply each fourth by 3

$$\frac{8}{12} = \frac{4 \times 2}{4 \times 3} \; \underline{>} \; \frac{1 \times 3}{4 \times 3} = \frac{3}{12}$$

Eight-twelfths is greater than three-twelfths

$\frac{2}{3} = \frac{4}{6}$

$\frac{1}{4} = \frac{3}{12}$

4.

Multiply each fourth by 5

Multiply each fifth by 4

$$\frac{15}{20} = \frac{5 \times 3}{5 \times 4} \; \underline{<} \; \frac{4 \times 4}{5 \times 4} = \frac{16}{20}$$

Fifteen-twentieths is less than sixteen-twentieths

$\frac{3}{4} = \frac{15}{20}$

$\frac{4}{5} = \frac{16}{20}$

Session 4: Self-Reflection

5th Grade - Readiness Standard 3 - 4.NF.2

Learning Target: I will compare two fractions with different numerators and different denominators

Briefly discuss student responses:

- ➢ What did I learn today about comparing fractions with different numerators and different denominators?

- ➢ How confident do I feel about comparing fractions with different numerators and different denominators on my own?
  (Thumbs up, down, or sideways)

Quick Check - Form D

5th Grade - Readiness Standard 3 - 4.NF.2

Name_____ Date_____

Learning Target: I will compare two fractions.

Directions: Fill in the blank. (>, <, =)
(Work time: 5 minutes)

1. $\dfrac{2}{5}$ ____ $\dfrac{1}{4}$	**2.** $\dfrac{1}{6}$ ____ $\dfrac{2}{12}$
3. $\dfrac{5}{6}$ ____ $\dfrac{4}{7}$	**4.** $\dfrac{3}{4}$ ____ $\dfrac{5}{8}$
5. $\dfrac{2}{3}$ ____ $\dfrac{8}{12}$	**6.** $\dfrac{5}{8}$ ____ $\dfrac{3}{4}$

Learning Target: I will compare two fractions with different numerators and different denominators

Session 5: Guided Practice (We Do)

We Do Together: (Teacher Actions)

➢ Use number lines to help you use common denominators to compare fractions.

Problem type A: One denominator is a multiple of the other.

1.

$\frac{7}{8}$ _____ $\frac{1}{2}$

2.

$\frac{2}{3}$ _____ $\frac{4}{6}$

Problem type B: One denominator is NOT a multiple of the other.

3.

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

4.

$\frac{3}{4}$ _____ $\frac{3}{5}$

Learning Target: I will compare two fractions with different numerators and different denominators

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

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

➢ Students take turns leading to use number lines and common denominators to compare fractions.

Problem type A: One denominator is a multiple of the other.

5.

$\dfrac{7}{8}$ _____ $\dfrac{3}{4}$

6.

$\dfrac{1}{2}$ _____ $\dfrac{3}{6}$

Problem type B: One denominator **is NOT** a multiple of the other.

7.

$\dfrac{2}{3}$ _____ $\dfrac{3}{4}$

8.

$\dfrac{1}{2}$ _____ $\dfrac{2}{5}$

Session 5: Self-Reflection

5th Grade - Readiness Standard 3 - 4.NF.2

Learning Target: I will compare two fractions with different numerators and different denominators

Briefly discuss student responses:

> ➢ What did I learn today about comparing fractions with different numerators and different denominators?

> ➢ How confident do I feel about comparing fractions with different numerators and different denominators on my own?
> *(Thumbs up, down, or sideways)*

Name_____ Date_____

Learning Target: I will compare two fractions.

Directions: Fill in the blank. (>, <, =)
(Work time: 5 minutes)

1. $\dfrac{2}{3}$ ____ $\dfrac{4}{5}$	**2.** $\dfrac{1}{4}$ ____ $\dfrac{4}{12}$
3. $\dfrac{3}{4}$ ____ $\dfrac{2}{7}$	**4.** $\dfrac{3}{5}$ ____ $\dfrac{5}{8}$
5. $\dfrac{1}{3}$ ____ $\dfrac{3}{9}$	**6.** $\dfrac{4}{6}$ ____ $\dfrac{3}{4}$

Learning Target: I will compare two fractions with different numerators and different denominators

Session 6: Guided Practice (We Do)

We Do Together: (Teacher Actions)

➢ Use number lines to help you use common denominators to compare fractions.

Problem type A: One denominator is a multiple of the other.

1.

$\frac{3}{4}$ _____ $\frac{1}{2}$

2.

$\frac{1}{3}$ _____ $\frac{2}{6}$

Problem type B: One denominator **is NOT** a multiple of the other.

3.

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

4.

$\frac{1}{4}$ _____ $\frac{2}{5}$

Learning Target: I will compare two fractions with different numerators and different denominators

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

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

➢ Students take turns leading to use number lines and common denominators to compare fractions.

Problem type A: One denominator is a multiple of the other.

5.

$$\frac{4}{8} \text{\_\_\_\_\_} \frac{3}{4}$$

6.

$$\frac{1}{2} \text{\_\_\_\_\_} \frac{2}{8}$$

Problem type B: One denominator **is NOT** a multiple of the other.

7.

$$\frac{1}{3} \text{\_\_\_\_\_} \frac{2}{5}$$

8.

$$\frac{1}{2} \text{\_\_\_\_\_} \frac{2}{3}$$

Learning Target: I will compare two fractions with different numerators and different denominators

Briefly discuss student responses:

➢ What did I learn today about comparing fractions with different numerators and different denominators?

➢ How confident do I feel about comparing fractions with different numerators and different denominators on my own?
(Thumbs up, down, or sideways)

DELTA MATH
· RtI PROGRAM

Name_____ Date_____

Learning Target: I will compare two fractions.

Directions: Fill in the blank. (>, <, =)
(Work time: 5 minutes)

1. $\dfrac{1}{3}$ ___ $\dfrac{2}{7}$	**2.** $\dfrac{2}{3}$ ___ $\dfrac{6}{12}$
3. $\dfrac{3}{5}$ ___ $\dfrac{4}{7}$	**4.** $\dfrac{3}{4}$ ___ $\dfrac{6}{8}$
5. $\dfrac{1}{5}$ ___ $\dfrac{3}{10}$	**6.** $\dfrac{5}{6}$ ___ $\dfrac{3}{4}$

Name _____ **Date** _____

Learning Target: I will compare two fractions with different numerators and different denominators

Session 7: Guided Practice (We Do)

We Do Together: (Teacher Actions)

➢ Use common denominators to compare fractions. Then use number lines to check your work.

Problem type A: One denominator is a multiple of the other.

1.

$\dfrac{3}{8}$ _____ $\dfrac{2}{4}$

2.

$\dfrac{1}{2}$ _____ $\dfrac{3}{6}$

Problem type B: One denominator is NOT a multiple of the other.

3.

$\dfrac{2}{3}$ _____ $\dfrac{3}{5}$

4.

$\dfrac{3}{4}$ _____ $\dfrac{4}{6}$

Learning Target: I will compare two fractions with different numerators and different denominators

Session 7: **Guided Practice** (We Do - Continued)

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

➢ Students take turns leading to use common denominators to compare fractions.

Problem type A: One denominator is a multiple of the other.

5.

$\dfrac{5}{8}$ _____ $\dfrac{3}{4}$

6.

$\dfrac{1}{2}$ _____ $\dfrac{2}{6}$

Problem type B: One denominator **is NOT** a multiple of the other.

7.

$\dfrac{1}{3}$ _____ $\dfrac{2}{4}$

8.

$\dfrac{1}{2}$ _____ $\dfrac{2}{3}$

Session 7: Self-Reflection
5th Grade - Readiness Standard 3 - 4.NF.2

Learning Target: I will compare two fractions with different numerators and different denominators

Briefly discuss student responses:

- ➢ What did I learn today about comparing fractions with different numerators and different denominators?

- ➢ How confident do I feel about comparing fractions with different numerators and different denominators on my own?
  (Thumbs up, down, or sideways)

Quick Check - Form G

5th Grade - Readiness Standard 3 - 4.NF.2

Name_____ Date_____

Learning Target: I will compare two fractions.

Directions: Fill in the blank. (>, <, =)
(Work time: 5 minutes)

1. $\dfrac{2}{5}$ —— $\dfrac{1}{3}$	2. $\dfrac{3}{4}$ —— $\dfrac{4}{12}$
3. $\dfrac{3}{5}$ —— $\dfrac{4}{7}$	4. $\dfrac{2}{3}$ —— $\dfrac{8}{12}$
5. $\dfrac{2}{3}$ —— $\dfrac{3}{9}$	6. $\dfrac{5}{6}$ —— $\dfrac{3}{4}$

Learning Target: I will compare two fractions with different numerators and different denominators

Session 8: Guided Practice (We Do)

We Do Together: (Teacher Actions)

➢ Use common denominators to compare fractions. Then use number lines to check your work.

Problem type A: One denominator is a multiple of the other.

1.

$\dfrac{7}{8}$ _____ $\dfrac{3}{4}$

2.

$\dfrac{2}{3}$ _____ $\dfrac{4}{6}$

Problem type B: One denominator **is NOT** a multiple of the other.

3.

$\dfrac{1}{3}$ _____ $\dfrac{2}{4}$

4.

$\dfrac{3}{4}$ _____ $\dfrac{4}{5}$

Learning Target: I will compare two fractions with different numerators and different denominators

Session 8: Guided Practice (We Do - Continued)

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

➢ Students take turns leading to use common denominators to compare fractions.

Problem type A: One denominator is a multiple of the other.

5.

$\dfrac{3}{8}$ _____ $\dfrac{1}{4}$

6.

$\dfrac{1}{2}$ _____ $\dfrac{2}{6}$

Problem type B: One denominator **is NOT** a multiple of the other.

7.

$\dfrac{2}{3}$ _____ $\dfrac{3}{4}$

8.

$\dfrac{3}{4}$ _____ $\dfrac{2}{3}$

Session 8: Self-Reflection

5th Grade - Readiness Standard 3 - 4.NF.2

Learning Target: I will compare two fractions with different numerators and different denominators

Briefly discuss student responses:

> ➢ What did I learn today about comparing fractions with different numerators and different denominators?

> ➢ How confident do I feel about comparing fractions with different numerators and different denominators on my own?
> *(Thumbs up, down, or sideways)*

Quick Check - Form H

5th Grade - Readiness Standard 3 - 4.NF.2

Name_____ Date_____

Learning Target: I will compare two fractions.

Directions: Fill in the blank. (>, <, =)
(Work time: 5 minutes)

1. $\dfrac{2}{5}$ ___ $\dfrac{1}{4}$	**2.** $\dfrac{1}{6}$ ___ $\dfrac{2}{12}$
3. $\dfrac{5}{6}$ ___ $\dfrac{4}{7}$	**4.** $\dfrac{3}{4}$ ___ $\dfrac{5}{8}$
5. $\dfrac{2}{3}$ ___ $\dfrac{8}{12}$	**6.** $\dfrac{5}{8}$ ___ $\dfrac{3}{4}$

Independent Practice (You Do)

Learning Target: I will compare two fractions with different numerators and different denominators

Readiness for adding and subtracting mixed numbers with like denominators

Title of Game: Play "Whose fraction is Greater?"

Number of Players: 2

Objective: To be the player with the most (or least) cards at the end of the game.

Materials:

➤ 1 set of fraction-cards per player (Player 1 – Set A and Player 2 – Set B.)

➤ 1 recording sheet per player

Directions:

➤ Each player turns over their top card. Both players write the fraction on their recording sheet

➤ Both players write each fraction on their recording sheet and uses common denominators to compare the two fractions.

➤ The player with the greater fraction writes the correct inequality sign and says,

"My fraction ____ is greater than ____, because _____."

➤ The player with the greater fraction takes both cards

➤ Repeat until all cards have been played

Decide the Winner:

➤ At the end of the game, the teacher flips a coin

   o If the coin lands **heads up**, the winner is the player with the **greater** number of cards

   o If the coin lands **tails up**, the winner is the player with the **lesser** number of cards

Accessibility Option:

➤ Use the optional recording sheet for students requiring visual support for verifying answers. (p. 31 and 32)

Learning Target: I will compare two fractions with different numerators and different denominators

Independent Practice: Whose Fraction is Greater?
(Recording Sheet)

Directions:

➢ Each player turns over their top card. Both players write the fraction on their recording sheet

➢ Both players write each fraction on their recording sheet and uses common denominators to compare the two fractions.

➢ The player with the greater fraction writes the correct inequality sign and says,

"My fraction ____ is greater than ____, because _____."

➢ The player with the greater fraction takes both cards

➢ Repeat until all cards have been played

Round 1	Round 2
_____ _____ Player 1 Player 2	_____ _____ Player 1 Player 2
Round 3	**Round 4**
_____ _____ Player 1 Player 2	_____ _____ Player 1 Player 2
Round 5	**Round 6**
_____ _____ Player 1 Player 2	_____ _____ Player 1 Player 2
Round 7	**Round 8**
_____ _____ Player 1 Player 2	_____ _____ Player 1 Player 2
Round 9	**Round 10**
_____ _____ Player 1 Player 2	_____ _____ Player 1 Player 2

DELTA MATH
R+I PROGRAM

Learning Target: I will compare two fractions with different numerators and different denominators

Independent Practice: Whose Fraction is Greater?
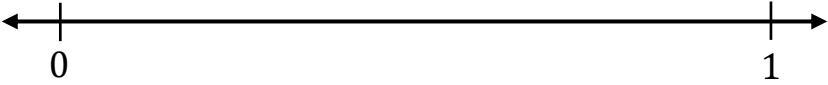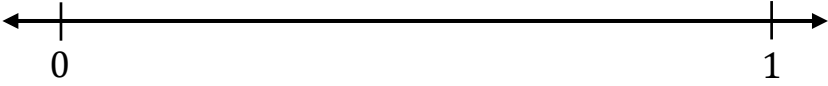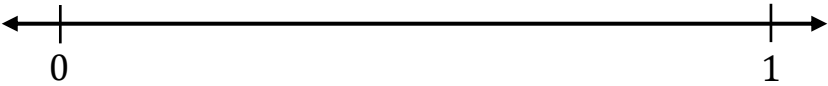### *(Recording Sheet – Accessibility Option)*
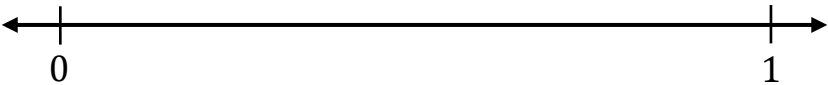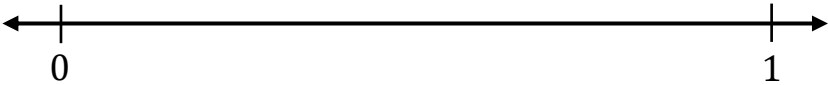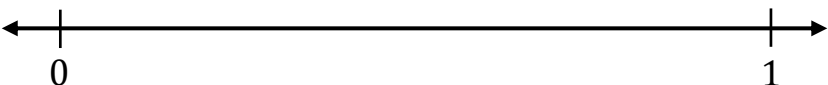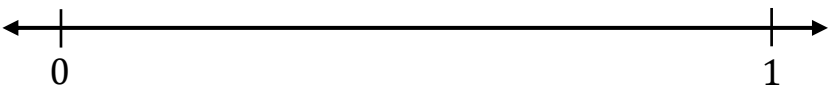
Directions:

➢ Each player turns over their top card. Both players write the fraction on their recording sheet

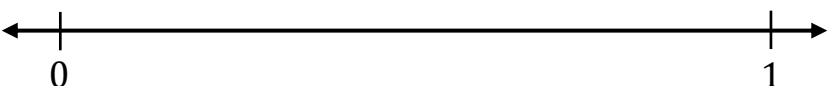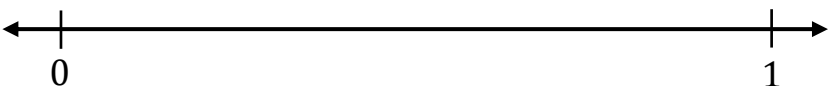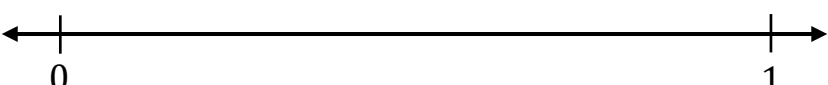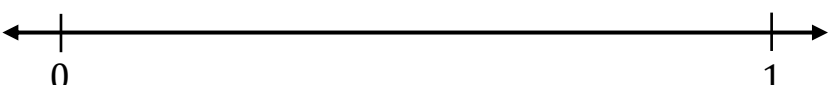➢ Both players write each fraction on their recording sheet and uses common denominators to compare the two fractions and visually checks their work using number lines

➢ The player with the greater fraction writes the correct inequality sign and says,

> *"My fraction ___ is greater than ___, because ____."*

➢ The player with the greater fraction takes both cards

➢ Repeat until all cards have been played

1.

_____   _____
Player 1   Player 2

|
0

|
1

|
0

|
1

2.

_____   _____
Player 1   Player 2

|
0

|
1

|
0

|
1

3.

_____   _____
Player 1   Player 2

|
0

|
1

|
0

|
1

4.

_____   _____
Player 1   Player 2

|
0

|
1

|
0

|
1

Independent Practice: Whose Fraction is Greater?

(Recording Sheet – Accessibility Option Continued)

5.

_____   _____
Player 1   Player 2

0   1

0   1

6.

_____   _____
Player 1   Player 2

0   1

0   1

7.

_____   _____
Player 1   Player 2

0   1

0   1

8.

_____   _____
Player 1   Player 2

0   1

0   1

9.

_____   _____
Player 1   Player 2

0   1

0   1

10.

_____   _____
Player 1   Player 2

0   1

0   1

| Set A | | same as | Set B | |

$\dfrac{3}{4}$ *Set A*	$\dfrac{3}{6}$ *Set A*	$\dfrac{3}{4}$ *Set B*	$\dfrac{3}{6}$ *Set B*
$\dfrac{2}{3}$ *Set A*	$\dfrac{2}{6}$ *Set A*	$\dfrac{2}{3}$ *Set B*	$\dfrac{2}{6}$ *Set B*
$\dfrac{2}{2}$ *Set A*	$\dfrac{3}{8}$ *Set A*	$\dfrac{2}{2}$ *Set B*	$\dfrac{3}{8}$ *Set B*
$\dfrac{1}{4}$ *Set A*	$\dfrac{1}{2}$ *Set A*	$\dfrac{1}{4}$ *Set B*	$\dfrac{1}{2}$ *Set B*
$\dfrac{2}{4}$ *Set A*	$\dfrac{1}{3}$ *Set A*	$\dfrac{2}{4}$ *Set B*	$\dfrac{1}{3}$ *Set B*
$\dfrac{5}{8}$ *Set A*	$\dfrac{5}{6}$ *Set A*	$\dfrac{5}{8}$ *Set B*	$\dfrac{5}{6}$ *Set B*

<	>	=	<	>	=
Less Than *Set A*	Greater Than *Set A*	Equal to *Set A*	Less Than *Set B*	Greater Than *Set B*	Equal to *Set B*

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?

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?