



Program Information	<i>[Lesson Title]</i> Comparing Fractions		TEACHER NAME Tessa Torowski		PROGRAM NAME Project LEARN of Summit County		
	<i>[Unit Title]</i>		NRS EFL(s) 3		TIME FRAME 60 minutes		
Instruction	<u>ABE/ASE Standards – Mathematics</u>						
	Numbers (N)		Algebra (A)		Geometry (G)		Data (D)
	Numbers and Operation	N.3.15	Operations and Algebraic Thinking		Geometric Shapes and Figures		Measurement and Data
	The Number System		Expressions and Equations		Congruence		Statistics and Probability
	Ratios and Proportional Relationships		Functions		Similarity, Right Triangles. And Trigonometry		Benchmarks identified in RED are priority benchmarks. To view a complete list of priority benchmarks and related Ohio ABLE lesson plans, please see the Curriculum Alignments located on the Teacher Resource Center .
	Number and Quantity				Geometric Measurement and Dimensions		
					Modeling with Geometry		



Mathematical Practices (MP)	
<input type="checkbox"/> Make sense of problems and persevere in solving them. (MP.1)	<input type="checkbox"/> Use appropriate tools strategically. (MP.5)
<input type="checkbox"/> Reason abstractly and quantitatively. (MP.2)	<input type="checkbox"/> Attend to precision. (MP.6)
<input type="checkbox"/> Construct viable arguments and critique the reasoning of others. (MP.3)	<input type="checkbox"/> Look for and make use of structure. (MP.7)
<input checked="" type="checkbox"/> Model with mathematics. (MP.4)	<input type="checkbox"/> Look for and express regularity in repeated reasoning. (MP.8)
<p>LEARNER OUTCOME(S)</p> <ul style="list-style-type: none"> • The student will be able to: <ul style="list-style-type: none"> ○ compare two fractions with different numerators and different denominators, ○ recognize that comparisons are valid only when the two fractions refer to the same whole, ○ record the results of comparisons with symbols $>$, $=$, or $<$, and ○ justify the conclusions, e.g., by using a visual fraction model. 	<p>ASSESSMENT TOOLS/METHODS</p> <ul style="list-style-type: none"> • Formative assessments during the opener and at each station • <i>Comparing Fractions Quiz</i>
<p>LEARNER PRIOR KNOWLEDGE</p> <ul style="list-style-type: none"> • Learners will need basic knowledge of fractions-- numerators represent part of a whole represented by a denominator 	



INSTRUCTIONAL ACTIVITIES	RESOURCES
<ol style="list-style-type: none">1. Opener- Pose the following scenario: You drank half of your coffee, and you mom drank three fourths of her coffee. Who has more coffee left? Provide students with poster or scrap paper to model their answers. Require a visual aid to justify their response. Share each group's answer.<ol style="list-style-type: none">a. Use this formative assessment to teach or re-teach any basic concepts before moving on.2. Explain the lesson objective: Comparing fractions with different numerators and denominators. Explain that there are multiple ways of finding answers. Some may prefer visuals, others may prefer proportions. This lesson will provide an opportunity to explore both.3. Before breaking into small groups, ask the students if they know any ways to quickly compare fractions. Provide the following fractions as an example: $\frac{1}{4}$, $\frac{6}{10}$, $\frac{75}{100}$<ol style="list-style-type: none">a. Do students recognize how to quickly assess if a fraction is more than a half or less than a half? Do they do this mathematically in their head? Do they use a mental model like imagining money or slices of pizza for example?b. Model for students how to think of each of these fractions as pennies out of a dollar. "One quarter" is the same as 25 cents. 75 hundredths is the same as seventy-five cents or "three quarters." Six tenths of a dollar is like six dimes.4. In small groups have students work at each station to order and/or compare fractions.	<p>Poster or scrap paper for student use</p> <p>Copies of <i>Comparing Fractions</i> stations 1, 2, and 3 (attached)</p> <p>Student copies of <i>Comparing Fractions Quiz</i> (attached)</p>



	<p>5. After the stations are complete, use fractions from the various activities to practice comparing as a class. Write two fractions on the board from the stations invite students to answer using $<$, $>$, $=$.</p> <p>6. Complete the activity with the <i>Comparing Fractions Quiz</i>.</p>	
	DIFFERENTIATION <ul style="list-style-type: none">• Have a variety of manipulatives for students to use to model fractions ex: buttons, coins, base ten blocks, paper.• Students can be mixed skill groups to foster peer tutoring or homogenous groups and work with instructors/volunteers.	
Reflection	TEACHER REFLECTION/LESSON EVALUATION	
	ADDITIONAL INFORMATION	



Comparing Fractions: Station 1

You work at the local library that is hosting a book signing. At the last minute, the author needs to change the time of the event from 5:00 pm to 6:00 pm. Because this is a private event you have phone numbers for all 15 of those who registered. You and your coworkers Carl and Tonya start making calls to inform the registrants of the time change. Carl made one-third of the calls, and Tonya made two-fifths of the calls. You made however many calls were left.

How many calls did each of you make and who made the most calls all together? Use pictures and numbers to explain your answer.



Comparing Fractions: Station 2

The goal is to order the following fractions from greatest to least. First try sorting by estimation. Ask yourself if the fraction is more than a half or less than a half. Use fractions with the same denominators as benchmarks. After you sort by estimation, convert the fractions to those with common denominators in order to get your final answers.

$7/12$ $1/2$ $3/4$ $2/3$ $4/6$



Comparing Fractions: Station 3

Represent the following fractions with an image of your choice, and then order them from least to greatest.

Three-Fourths

Seven-Eighths

One-Half

Name : _____

Score : _____

Teacher : _____

Date : _____

Write the Correct Comparison Symbol (>, < or =) in Each Box

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

11) $\frac{1}{2}$ $\frac{2}{5}$

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

12) $\frac{6}{8}$ $\frac{4}{10}$

3) $\frac{2}{8}$ $\frac{3}{10}$

13) $\frac{7}{10}$ $\frac{3}{8}$

4) $\frac{1}{3}$ $\frac{8}{10}$

14) $\frac{4}{5}$ $\frac{1}{3}$

5) $\frac{4}{5}$ $\frac{6}{12}$

15) $\frac{1}{12}$ $\frac{2}{4}$

6) $\frac{7}{12}$ $\frac{9}{12}$

16) $\frac{1}{8}$ $\frac{1}{2}$

7) $\frac{3}{5}$ $\frac{2}{4}$

17) $\frac{3}{6}$ $\frac{1}{12}$

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

18) $\frac{1}{10}$ $\frac{1}{3}$

9) $\frac{6}{12}$ $\frac{2}{4}$

19) $\frac{1}{3}$ $\frac{2}{10}$

10) $\frac{5}{10}$ $\frac{2}{5}$

20) $\frac{1}{4}$ $\frac{2}{6}$

Name : _____

Score : _____

Teacher : _____

Date : _____

Write the Correct Comparison Symbol (>, < or =) in Each Box

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

11) $\frac{1}{2}$ $\frac{2}{5}$

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

12) $\frac{6}{8}$ $\frac{4}{10}$

3) $\frac{2}{8}$ $\frac{3}{10}$

13) $\frac{7}{10}$ $\frac{3}{8}$

4) $\frac{1}{3}$ $\frac{8}{10}$

14) $\frac{4}{5}$ $\frac{1}{3}$

5) $\frac{4}{5}$ $\frac{6}{12}$

15) $\frac{1}{12}$ $\frac{2}{4}$

6) $\frac{7}{12}$ $\frac{9}{12}$

16) $\frac{1}{8}$ $\frac{1}{2}$

7) $\frac{3}{5}$ $\frac{2}{4}$

17) $\frac{3}{6}$ $\frac{1}{12}$

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

18) $\frac{1}{10}$ $\frac{1}{3}$

9) $\frac{6}{12}$ $\frac{2}{4}$

19) $\frac{1}{3}$ $\frac{2}{10}$

10) $\frac{5}{10}$ $\frac{2}{5}$

20) $\frac{1}{4}$ $\frac{2}{6}$