Introduction
Caroline Johnson  
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TSL 518  
June 10, 2017  

Unit Information:  
Subject- Math  
Grade Level- Third Grade  
Unit Title- Fractions  
Lessons- 4-6  
Target Group- Mainstream Classroom with Integrated ELLS

Reading Materials:  
- https://www-k6.thinkcentral.com/dashboard/home

Lesson Resources:  
- This unit is from the Teacher’s Edition Book Math in Focus Volume 3B. All of the objectives were taken from the unit on fractions, Chapter 14. The lessons that will be focused on are 4-6; Lesson 14.4: Comparing Fractions, Lesson 14.5: Adding and Subtracting Fractions, Lesson 14.6: Fractions of a Set.

Goals of Unit:  
- I want my students to compare and order fractions.
- I want my students to add fractions with sums to 1.
- I want my students to subtract a like fraction from another like fraction.
- I want my students to read, write, and identify fractions of a set.
- I want my students to understand simplest form, like fractions, and unlike fractions.
Lesson 1
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<thead>
<tr>
<th>Level</th>
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<th>Content Objectives</th>
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<tbody>
<tr>
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<td>1. Compare and describe fractions using visual models.</td>
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<td>1. Compare and describe fractions using visual models.</td>
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**Lesson Objectives:**

1. Understand and compare fractions using visual models.

**Workbook:**

Less than, greater than, and equal to in fractions.

**Workbook:**

Less than, greater than, and equal to in fractions.

**Workbook:**

Less than, greater than, and equal to in fractions.

**Workbook:**

Less than, greater than, and equal to in fractions.

**Workbook:**

Less than, greater than, and equal to in fractions.

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Less than, greater than, and equal to in fractions.

**Workbook:**

Less than, greater than, and equal to in fractions.

**Workbook:**

Less than, greater than, and equal to in fractions.

**Workbook:**

Less than, greater than, and equal to in fractions.

**Workbook:**

Less than, greater than, and equal to in fractions.
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<th>Grammar</th>
<th>Words</th>
<th>Expression</th>
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<td>3. Greater than</td>
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Lesson 1: Comparing Fractions

Materials:

- Math in Focus Student Book 3B pgs. 130-131  Appendix G
- Math in Focus Teacher’s Edition pgs. 130-138
- Math in Focus Student Workbook pgs. 101-104 Appendix D

Supplemental Materials:

- Fraction strips Appendix A
- Fraction circles Appendix B
- Anchor chart with alligator greater than and less than symbols Appendix C
- Fraction Word Chart Appendix E
- Greater than Less than Activity Appendix F

Lesson Vocabulary:

- like fraction
- unlike fraction
- greater than
- less than
- equal to

Lesson Overview:

Building Background (10 minutes)

1. Begin whole group lesson by doing a warm-up activity on the white board. Draw the fraction strips ½ and ¼ on the board and shade the required number of equal parts. Ask the students which sentence is true?
   a. ½ is greater than ¼ (true)
   b. ½ is less than ¼

   Ask students to turn to their partner and explain their answer. Then call on one student to share.

2. Because students already know the idea of greater than and less than, review the symbols greater than and less than by referring to and discussing the anchor chart with the symbols on it. (Appendix C) Remind students that when the alligator’s mouth is open wide, that will be the greater number and the other side is the smaller number. Leave this anchor chart visible in order for the students to refer back to later on in the lesson. Go over the fraction word chart and remind students this is a good resource to use when doing the workbook pages later on in the lesson. (Appendix E)
Lesson (40 minutes)

1. Begin by doing the greater than and less than activity. (Appendix F) Teacher will review the vocabulary words greater than, less than, and equal to by using hand motions. (greater than = opening hands wide like an alligator mouth, less than = bringing hands together, and equal to is two arms parallel together making an equal sign.) Teacher will go over and model the example problem on the worksheet that is the same for each level of student. Students will then with a partner on their same level, complete the math problem by writing the words in the blank depending on their level. After students write in the words, they will together with their partner say the whole math problem while using the gesture to go with it. (Ex.- Students say ½ is equal to 2/4 (hand gesture for equal to). Students will do this for all the problems on their worksheet. Teacher will walk around listening to students work together using key vocabulary for the lesson.

2. Continue lesson by having students refer to pictures showing ¼, ⅓, and ⅔ of a vegetarian pie in Student Book pg. 130. (Appendix G) Draw the three different pies on the board. Tell students that all the fractions come from equal-sized wholes and each fraction corresponds to its pictorial representation. Remind students by telling them that you can only compare fractions from the same whole or equal-sized wholes.

3. Ask students, from the pictures of the vegetarian pies, can you say which fraction is greater, ¼ or ⅓? Which fraction is less, ¼ or ⅔? Have students turn and talk with a partner about the question and then have one student come up and write the answer on the board using the greater than and less than symbol. (Answer should be ⅔ > ¼)

4. Point out the fraction representation on the number lines at the top of pg. 131 of the Student Book. (Appendix G) Guide students to compare the fractions by observing the distances from zero to each representative fraction on the number line.
   a. Ask students, is the distance between 0 and ⅔ greater than the distance between 0 and ¼? Draw the number line on the board and model the distance by drawing an arrow. (Say: yes, ¼ is less than ⅔)
   b. Ask students, is the distance between 0 and ⅔ greater than the distance between 0 and ⅓? Draw the number line on the board and model the distance by drawing an arrow. (Say: no, ¼ is greater than ⅓)
   c. Say: Using the number lines, we see that ⅓ is greater than ¼. And ⅔ is less than ⅔.

5. Have students continue on pg. 131 by completing the guided practice with a partner. Review answers with the students in a whole group.

6. Have students complete Workbook pages based on their level. (Appendices D)
   a. Level 5s will complete 10 problems individually.
   b. Level 4s will complete problems 6 problems individually.
   c. Level 3s will complete 5 problems individually.
   d. Level 2s will illustrate 3 problems with a partner with access to fraction strips. (Appendix A and B)
   e. Level 1s will illustrate 2 problems with a partner and teacher support with access to fraction strips. (Appendix A and B)
Closure (5 minutes)

1. After students are finished working in their Workbooks, reflect as a whole group on today’s lesson by doing the activity, *Every Student Gets a Chance*. The teacher will write and say the objective on the board (Today we compared fractions by using pictorial representations and number lines). Illustrate the two math terms (number line and pictorial representation) when you are writing the objective on the board. Ask for a volunteer to read aloud what was written and then ask for a second volunteer to read aloud the same sentence. Continue to ask for volunteers and allow for as many students to read the sentence who want to. Do a quick assessment on students’ understanding by doing a 3, 2, 1 check. (3= they’ve got it, 2= almost understand, and 1=little understanding)

Assessment: Teacher will later correct student workbooks with feedback.
Narrative of Modifications

As I was going through the original lesson, I discovered many parts that I thought would work well for students in a third-grade mainstream classroom with integrated ELLs. However, I also found areas that needed modifying in order to ensure better understanding for the ELLs. The pacing of the original lesson seemed problematic and therefore was the first thing I modified. Because I thought the language learners would need more time, I added multiple opportunities to negotiate meaning with a partner. The original lesson had a lot of teacher talk and not many chances for students to pause and work through problems together. By allowing more interaction between the students, I think this will give the ELLs more time to process what the teacher is teaching with the support of their peers. With the modified lesson, students are not just looking at their workbook, but also talking to a partner and writing down answers.

The use of visuals was something I also wanted to add into the lesson. I found it important to begin the lesson with an anchor chart that would trigger the learners’ memory. The greater than and less than symbols are something that would have been previously taught in an earlier lesson. However, it is also something that can easily be forgotten and therefore a quick visual or anchor chart would be helpful. I believe the alligator mouth with the words greater than and less than on it would be a useful tool for any learner but especially an English Learner. I also found it important that the teacher use visuals on the board instead of just talking to the students during the lesson. For example, in the modified lesson I had the teacher drawing the pies on the board when they were talking about the different fractions. Although, the students had the visuals in their Student Books, additional graphics help ELLs stay on track with the lecture.

The most significant modification I made was to the workbook pages the students did at the end of the lesson. Originally, the lesson had the students doing all those pages in just one
day. I found the amount of words on the page and problems to be overwhelming for an ELL. This is why I decided to minimize the amount of problems based on the level. Also, levels 1 and 2 were able to work with a partner which can be a stress reliever since they are able to have support.

The last part of the lesson included a 5-minute reflection of the objective. I chose the activity, *Every Student Gets a Chance*, because not only does it do a great job of reinforcing new concepts, but also allows for students to practice output that beginning level English proficiency students are hearing from their peers. Also, at the end of the lesson, I added a quick check in using a gesture that can be beneficial to the teacher. From my experience, I find that most students are honest with how well they are understanding the lesson. By using a 3, 2, 1 rating scale, the teacher can see how the students’ feel and where to go next with instruction.
### Appendix A

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</table>
is greater than
is less than
Practice 4  Comparing Fractions

Compare the fractions.

Example

\[ \frac{5}{12} \quad \text{is greater than} \quad \frac{1}{2} \]

\[ \frac{1}{2} \quad \text{is less than} \quad \frac{5}{12} \]

1. \[ \frac{1}{2} \quad \underline{\quad} \quad \underline{\quad} \]

\[ \frac{5}{7} \quad \underline{\quad} \quad \underline{\quad} \quad \underline{\quad} \quad \underline{\quad} \quad \underline{\quad} \]

\[ \underline{\quad} \quad \underline{\quad} \quad \underline{\quad} \quad \underline{\quad} \quad \underline{\quad} \quad \underline{\quad} \]

is greater than \[ \underline{\quad} \quad \underline{\quad} \quad \underline{\quad} \quad \underline{\quad} \quad \underline{\quad} \quad \underline{\quad} \]

2. \[ \frac{1}{2} \quad \underline{\quad} \quad \underline{\quad} \]

\[ \frac{4}{9} \quad \underline{\quad} \quad \underline{\quad} \quad \underline{\quad} \quad \underline{\quad} \quad \underline{\quad} \quad \underline{\quad} \]

\[ \underline{\quad} \quad \underline{\quad} \quad \underline{\quad} \quad \underline{\quad} \quad \underline{\quad} \quad \underline{\quad} \]

is less than \[ \underline{\quad} \quad \underline{\quad} \quad \underline{\quad} \quad \underline{\quad} \quad \underline{\quad} \quad \underline{\quad} \]
Compare the fractions.

3. \(\frac{2}{3}\) \(\frac{1}{3}\)

\[\text{is greater than} \]

4. \(\frac{3}{8}\) \(\frac{5}{8}\)

\[\text{is less than} \]

5. \(\frac{4}{10}\) \(\frac{4}{5}\)

\[\text{is greater than} \]

6. \(\frac{3}{7}\) \(\frac{3}{5}\)

\[\text{is less than} \]
Appendix D

Level 5

Compare the fractions.

Example

\[
\frac{3}{4} \text{ and } \frac{7}{8}
\]

\[
\frac{3}{4} = \frac{6}{8}
\]

\[
\frac{7}{8} > \frac{3}{4}
\]

7. \[
\frac{7}{9} \text{ and } \frac{2}{3}
\]

\[
\frac{2}{3} = \frac{\phantom{0}}{\phantom{0}}
\]

\[
\frac{\phantom{0}}{\phantom{0}} < \frac{\phantom{0}}{\phantom{0}}
\]

8. \[
\frac{4}{5} \text{ and } \frac{1}{2}
\]

\[
\frac{4}{5} = \frac{\phantom{0}}{\phantom{0}} \quad \frac{1}{2} = \frac{\phantom{0}}{\phantom{0}}
\]

\[
\frac{\phantom{0}}{\phantom{0}} > \frac{\phantom{0}}{\phantom{0}}
\]

9. \[
\frac{5}{6} \text{ and } \frac{1}{4}
\]

\[
\frac{5}{6} = \frac{\phantom{0}}{\phantom{0}} \quad \frac{1}{4} = \frac{\phantom{0}}{\phantom{0}}
\]

\[
\frac{\phantom{0}}{\phantom{0}} < \frac{\phantom{0}}{\phantom{0}}
\]
Use number lines to compare fractions.

Example

Which is greater, $\frac{1}{3}$ or $\frac{2}{4}$?

\[\frac{2}{4} \quad > \quad \frac{1}{3}\]

Which is less, $\frac{2}{3}$ or $\frac{3}{4}$?

\[\frac{2}{3} \quad < \quad \frac{3}{4}\]

Complete.

10.

Which is greater, $\frac{3}{5}$ or $\frac{5}{6}$?  Which is less, $\frac{2}{5}$ or $\frac{3}{6}$?

\[> \quad <\]
Appendix D

Level 4

Practice 4 Comparing Fractions

Compare the fractions.

Example

\[
\frac{5}{12} \quad \frac{1}{2}
\]

\[\frac{1}{2}\] is greater than \[\frac{5}{12}\].

\[\frac{5}{12}\] is less than \[\frac{1}{2}\].

1. \[\frac{1}{2}\] \[\frac{5}{7}\]

\[\frac{1}{2}\] is greater than \[\frac{5}{7}\].
Compare the fractions.

3. \(\frac{2}{3}\) \(\frac{1}{3}\)

_____ is greater than _____.

4. \(\frac{3}{8}\) \(\frac{5}{8}\)

_____ is less than _____.

5. \(\frac{4}{10}\) \(\frac{4}{5}\)

_____ is greater than _____.

6. \(\frac{3}{7}\) \(\frac{3}{5}\)

_____ is less than _____.
Appendix D
Level 4

Use number lines to compare fractions.

Example

Which is greater, $\frac{1}{3}$ or $\frac{2}{4}$?

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

Which is less, $\frac{2}{3}$ or $\frac{3}{4}$?

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

Complete.

10.

Which is greater, $\frac{3}{5}$ or $\frac{5}{6}$? Which is less, $\frac{2}{5}$ or $\frac{3}{6}$?

$\frac{3}{5}$ or $\frac{5}{6}$?

$\frac{2}{5}$ or $\frac{3}{6}$?

> <
Practice 4  Comparing Fractions

Compare the fractions.

Example

\[
\frac{5}{12} \quad \frac{1}{2}
\]

\[
\frac{1}{2} \text{ is greater than } \frac{5}{12}.
\]

\[
\frac{5}{12} \text{ is less than } \frac{1}{2}.
\]

1. \[
\frac{1}{2} \quad \frac{5}{7}
\]

\[
\text{is greater than } \quad \text{is less than }.
\]

2. \[
\frac{1}{2} \quad \frac{4}{9}
\]

\[
\text{is less than }.
\]
Appendix D
Level 3

Compare the fractions.

3. \( \frac{2}{3} \)  \( \frac{1}{3} \)

\( \boxed{\text{_____}} \) is greater than \( \boxed{\text{_____}} \).

4. \( \frac{3}{8} \) \( \frac{5}{8} \)

\( \boxed{\text{_____}} \) is less than \( \boxed{\text{_____}} \).

5. \( \frac{4}{10} \) \( \frac{4}{5} \)

\( \boxed{\text{_____}} \) is greater than \( \boxed{\text{_____}} \).

It is easy to compare fractions with the same denominator.

It is also easy to compare fractions with the same numerator.
Appendix D
Level 2

Compare by shading the fractions.

1. \(\frac{2}{3}\) \(\frac{1}{3}\)
   
   \(\quad\) is greater than \(\quad\).

2. \(\frac{3}{8}\) \(\frac{5}{8}\)
   
   \(\quad\) is less than \(\quad\).

3. \(\frac{1}{2}\)
   \(\frac{4}{9}\)
   
   \(\quad\) is less than \(\quad\).

4. \(\frac{1}{3}\)
   \(\frac{3}{4}\)
   
   \(\quad\) is greater than \(\quad\).
Appendix D
Level 1

Compare by shading the fractions.

1. \[\frac{2}{3} \quad \frac{1}{3}\]

\[\text{is greater than}\]

2. \[\frac{1}{2} \quad \frac{4}{9}\]

\[\text{is less than}\]

3. \[\frac{1}{3} \quad \frac{3}{4}\]

\[\text{is greater than}\]
## Appendix E

### FRACTION WORDS

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<th>Fraction Words</th>
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<td>Tenth(s)</td>
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Directions: Fill in the blank by writing 1 of the 3 the comparison words.

Example:

1/2 is ___equal___ to 2/4.

1.) 3/4 is _______ _________ 1/4.

2.) 1/8 is _______ _________ 7/8.

3.) 4/10 is _______ _________ 1/5.

4.) 1/3 is _______ _________ 1/2.

5.) 1/2 is _______ _________ 5/10.

6.) 3/9 is _______ _________ 1/2.

7.) 3/6 is _______ _________ 2/6.

8.) 1/2 is _______ _________ 4/10.

9.) 4/5 is _______ _________ 3/5.

10.) 1/6 is _______ _________ 4/6.
Directions: Fill in the blank by writing 1 of the 3 comparison words.

Example:

1/2 is _______ _______ _______ 2/4.

1.) 3/4 is _______ _______ _______ 1/4.

2.) 1/8 is _______ _______ _______ 7/8.

3.) 4/10 is _______ _______ _______ 1/5.

4.) 1/3 is _______ _______ _______ 1/2.

5.) 1/2 is _______ _______ _______ 5/10.
Appendix F
Level 1 & 2

Directions: Fill in the blank by writing 1 of the 3 the comparison words.

<table>
<thead>
<tr>
<th>Greater than</th>
<th>Less than</th>
<th>Equal to</th>
</tr>
</thead>
<tbody>
<tr>
<td>is greater than</td>
<td>is less than</td>
<td>is equal to</td>
</tr>
</tbody>
</table>

Example:

1/2 is **equal** to 2/4.

1.) 3/4 is _______ _______ 1/4.

2.) 1/8 is _______ _______ 7/8.

3.) 1/3 is _______ _______ 1/2.
Lesson Objectives

- Compare and order fractions.
- Show fractions as points or distances on a number line.
- Compare and order fractions using benchmark fractions.

Vocabulary

- benchmark
- like fractions
- unlike fractions

Learn

**Compare fractions using pictures and number lines.**

Zoe served \( \frac{1}{2} \) of a vegetarian pie.

Lisa served \( \frac{3}{4} \) of an equal-sized vegetarian pie.

Abby served \( \frac{1}{4} \) of another equal-sized vegetarian pie.

Lisa had a bigger part than Zoe. \( \frac{3}{4} \) is greater than \( \frac{1}{2} \).

Abby had a smaller part than Zoe. \( \frac{1}{4} \) is less than \( \frac{1}{2} \).
The number lines show $\frac{1}{2}$, $\frac{1}{4}$, and $\frac{3}{4}$.

From the number lines, $\frac{3}{4}$ is greater than $\frac{1}{2}$.

$\frac{1}{4}$ is less than $\frac{1}{2}$.

Guided Practice

Compare the fractions.

1. $\frac{5}{6}$ is greater than $\frac{1}{2}$.

2. $\frac{7}{8}$ is less than $\frac{1}{2}$.

Copy the number lines on grid paper.

Mark and label the fractions $\frac{1}{3}$, $\frac{2}{3}$, $\frac{1}{4}$, and $\frac{3}{4}$ on the appropriate number line.

Use your number lines from 3 to compare. Choose $>$ or $<$.

4. $\frac{2}{3} \quad \frac{3}{4}$

5. $\frac{1}{3} \quad \frac{1}{4}$

Lesson 94.4 Comparing Fractions
Lesson 2
Lesson 2
Indicators, & Functional Language Chart

<table>
<thead>
<tr>
<th>Content Objectives</th>
<th>Language Objectives</th>
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<tbody>
<tr>
<td>1. Students will be able to add and subtract fractions with like denominators.</td>
<td>1. After guided practice and whole group discussion, students will be able to read word problems and based on the information from them will either add or subtract the like fractions.</td>
</tr>
</tbody>
</table>

<table>
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<tr>
<th>Domain/Topic</th>
<th>Level 5</th>
<th>Level 4</th>
<th>Level 3</th>
<th>Level 2</th>
<th>Level 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Read/Write</td>
<td>Individually, students will be able to read 5 word problems and decide whether to add or subtract the fractions, then solve and write down the answer in a complete answer.</td>
<td>Individually, students will be able to read 5 word problems and decide whether to add or subtract the fractions, then solve and write down the answer using a sentence frame.</td>
<td>Individually, students will be able to read 4 modified word problems that have the important information underlined and will decide whether to add or subtract the fractions. Then students will solve and write down the answer using a sentence frame.</td>
<td>In pairs and with pictorial support, students will be able to read 4 modified word problems that have the important information underlined and decide whether to add or subtract the fractions, then solve and write the answer with a sentence frame.</td>
<td>With teacher support and pictorial support, students will be able to read 3 modified word problems that have the important information underlined and decide whether to add or subtract the fractions, then solve and write the answer with a sentence frame.</td>
</tr>
<tr>
<td>Topic: Add and Subtract Fractions</td>
<td></td>
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<tr>
<td>Function</td>
<td>Situation</td>
<td>Expression</td>
<td>Words</td>
<td>Grammar</td>
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<td>---------------------</td>
<td>--------------------------------</td>
<td>---------------------------------------------------------------------------</td>
<td>----------------------------------------</td>
<td>-----------------------</td>
<td></td>
</tr>
<tr>
<td>1. Adding and</td>
<td>Adding and Subtracting Fractions</td>
<td>A <strong>1</strong> fraction has the same denominator.</td>
<td>1) like, unlike</td>
<td>nouns, verbs, adjectives</td>
<td></td>
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<tr>
<td>Subtracting</td>
<td></td>
<td>A <strong>2</strong> fraction has different denominators.</td>
<td>2) like, unlike</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>When you see the word altogether in a word problem you <strong>3</strong> the fractions.</td>
<td>3) add, subtract</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>What part of the fraction <strong>4</strong> means to <strong>5</strong>.</td>
<td>4) is left, remains</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>6</strong> means to <strong>7</strong>.</td>
<td>5) add, subtract</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>6) how much was left, how many more</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>7) add, subtract</td>
<td></td>
<td></td>
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</tbody>
</table>
Lesson 2: Adding and Subtracting Like Fractions

Materials:

- Student Book 3B, pp. 148-150 (Appendix H)
- Student Workbook 3B, pp 107-112 (Appendix I)
- Fraction Word Problems (Appendix J)

Supplemental Materials:

- Fraction Pizzas (Appendix K)
- Steps for Solving Word Problems Poster (Appendix L)
- Response Cards (Appendix M)
- Operations Chart (Appendix N)

Lesson Vocabulary:

- like fractions
- unlike fractions
- addition
- subtraction

Lesson Overview:

Building Background (5 minutes)

1.) Begin with a 5-minute warm-up reviewing how to use models to add and subtract like fractions. Draw the models on the board.
   Ask: What do you get if you add 2/3 to 1/3? (3/3 or 1)
   Ask: What do you get if you subtract ¼ from ¾? (2/4 or ½)

2.) Review and refer to Fraction Pizza Chart (Appendix K), Steps for Solving Word Problems Poster (Appendix L), and Operations Chart (Appendix N) and explain that these will be helpful when solving word problems.

Lesson (50 minutes)

Learn Adding Like Fractions

1.) Have students turn to page 148 of their student book B. Read the word problem to the students. Say: In this learn section, the term altogether indicates that we need to add to find the fraction of the omelet that the siblings ate.
2.) Point out that the fractions to be added are like fractions. Have students recall how they add like fractions in Grade 2. Say: When adding like fractions, you only add the numerator. The denominator remains unchanged.

3.) Note how the various representations (pictures, bar model, number sentence, and word sentence) are used to model the word problem. Guide students to see how the picture has been translated into a bar model. Then point out how the bar model leads to the number sentence.

4.) Guide students to add like fractions greater than fourths on page 149 of student book B.

Learn Subtracting Like Fractions

5.) Read the word problem. Ask students whether they should add or subtract to find the answer. Refer to the Operations Chart. (Appendix N) Draw the bar model. Point to the relevant parts when you say: To find the fraction of the trail Yvonne hiked after lunch, subtract the fraction of the trail she hiked before lunch from the total fraction of the trail she hiked.

6.) Guided Practice page 150. This exercise requires students to subtract a fraction from a whole. Say: When subtracting a fraction from a whole, the whole can be rewritten as a like fraction. Write $1 - 1/3 = 3/3 - 1/3 = 2/3$. Guide students to subtract like fractions. Remind students to use the bar model.

7.) Have students in pairs, complete the Let’s Practice section in student book B page 150. This practice provides reinforcement in working with like fractions greater than fourths. Exercises 1-4 require students to add and subtract like fractions. Encourage students who need fraction bars to use them.

Common Error: Students may add both the numerator and denominator when adding fractions. Reinforce the idea that the denominator in the sum stays the same. Draw a model to show that when adding fractions, the number of equal parts that the whole is divided into, the denominator, remains the same. What changes will be the addition or subtraction of the shaded parts that form the numerator.

Math Journal pg.150 (Appendix H)

8.) Have students work in groups with mixed levels to solve the problem in their math journal. Use the SIOP activity Group Response with a White Board. Before students break up into groups, point out to students that the model representing the number sentence $2/4 + 1/4$ is correct but the final answer given is incorrect. Assign one student who is a proficient reader to read the word problem aloud to the group. Then have students individually write down with paper and pencil what they think the answer is. After that, tell students to now share their responses with each other, and as a group the students will determine the correct answer (They may use a few correct answers). One
person from the group will record the answer on the white board and share out their response.

9.) Students will next solve word problems from the Fraction Word Problem worksheet based on their level (See Lesson 2 Performance Indicators) (Appendix I)

10.) After students finish doing the word problems, have them complete student workbook pgs. 107-110 based on their level. (Appendix I)

Closure (5 minutes)

1.) Finish by doing a whole group reflection of the lesson by handing each student a response card. (Appendix M) Ask the following questions:

a. I understand adding fractions with like denominators (Point to an example on the board)
b. I understand subtracting fractions with like denominators (Point to an example on the board)
c. I feel confident solving word problems with fractions in them. (Hold up Fraction Word Problem worksheet (Appendix I)

Students will respond with their response cards by using the Rating Scale (4 = Yes, 3 = Mostly, 2 = Somewhat 1 = Not sure 0= Not at all)
Narrative of Modifications

The topic of adding and subtracting fractions with like denominators is a review of what students learned in 2nd grade. However, the skill of solving word problems with fractions is somewhat new and therefore needs to really be taken apart step by step. The bulk of this lesson was the completion of student workbook pages after some whole group instruction and guided practice with the teacher. There was only one example with a word problem from the original lesson, and because I wanted to provide more opportunities for the students to read and solve word problems, I created Appendix L.

Each level has different expectations. Beginning with level 5, I found it appropriate for students to not only draw their own picture but also write out their answer. This is why I left space for students to create their answer in a complete sentence without the help of a sentence frame. Level 4 students have the same reading expectations as level 5, however I provide a sentence frame to help articulate their answer. Level 3 students have one fewer problem to solve and I also modified the reading of the word problems by underlining key words and important information for solving the problem. This level also has a picture frame (a circle) as a reminder and support to draw a picture in order to help solve the problem. The support that was added to level 2 students is the fraction lines in the circle, therefore the students can now shade the numbers from the word problem to help them solve. The most significant modifications I made for level 1 students was the modification of the reading. I still wanted this level to be reading, so to make it less overwhelming for them, I made the print large, took out unnecessary words, and changed the format. Even still, if the students are not able to read every word, they will be able to pull of the important numbers from the word problem and be able to be successful at solving it.
Level 1 students also had less problems to solve because after this activity, the students are
expected to solve problems in their workbook.

The next modifications I made to this lesson were the supplemental materials that I found
essential for ELs to have when solving word problems. This includes charts on key words for
adding and subtracting and steps that include visuals for solving word problems. I think it is
always important to provide additional visuals and support for students that can be referred to
quickly and easily to make completing their work less overwhelming. Another modification
made to the original lesson was the workbook pages. During this lesson, the students were doing
a lot practice of the skill, so therefore I decided to lessen the number of problems for levels 1 and
2.

Lastly, I incorporated 2 different activities that will benefit the ELs in the classroom from
the text, 99 Ideas and Activities for Teaching English Learners with The SIOP Model. The first is
called, Group Response with a White Board. The purpose of this activity is to create
opportunities for interaction while incorporating individual responses. This is a good activity for
students with lower proficiency levels because they are able to participate without having to do a
lot of talking. Talking will be up to them when they feel comfortable and instead are able to do a
lot of listening to their peers. I would predict that the more confident students will write the final
answer and explain the groups’ decision.

Including a quick reflection or wrap up to the lesson assists with not only the students’
understanding of content, but also for the teachers to assess understanding. I chose to use
response cards for students to use when answering the teacher’s questions. This way, again
students are able to participate and give their input without having to produce output if they are
not feeling ready. This hands-on activity allows students to take ownership of their
comprehension, while the teacher can do a quick assessment of how students are feeling and where to go next.
Lesson Objectives

- Add two or three like fractions with sums to 1.
- Subtract a like fraction from another like fraction or one whole.

Add like fractions.

Jerome ate $\frac{1}{7}$ of an omelet.

His brother Randy ate $\frac{5}{7}$ of it.

What fraction of the omelet did they eat altogether?

\[
\frac{1}{7} + \frac{5}{7} = \frac{6}{7}
\]

They ate $\frac{6}{7}$ of the omelet altogether.
Guided Practice

Complete.

1. Add $\frac{2}{6}$ and $\frac{3}{6}$.

$$\frac{2}{6} + \frac{3}{6} = \frac{5}{6}$$

Subtract like fractions.

Yvonne hiked $\frac{2}{7}$ of a forest trail before lunch.
She hiked again after lunch.
By the end of the day, she had hiked $\frac{6}{7}$ of the trail.
What fraction of the trail did Yvonne hike after lunch?

$$\frac{6}{7} - \frac{2}{7} = \frac{4}{7}$$

Yvonne hiked $\frac{4}{7}$ of the forest trail after lunch.
Appendix H

2 \[ 1 - \frac{3}{5} = ? \]

\[ 1 - \frac{3}{5} = \frac{5}{5} - \frac{3}{5} \]

\[ = ? \]

1 whole = \( \frac{5}{5} \)

Let's Practice

Add or subtract.

1 \( \frac{6}{11} + \frac{5}{11} = ? \)

2 \( \frac{1}{12} + \frac{3}{12} + \frac{5}{12} = ? \)

3 \( \frac{7}{8} - \frac{4}{8} = ? \)

4 \( 1 - \frac{1}{6} - \frac{3}{6} = ? \)

ON YOUR OWN

Go to Workbook B:
Practice 5, pages 107–112

Reading and Writing Math
Math Journal

Rachel is adding like fractions.

This is what she writes:

\[ \frac{2}{4} + \frac{1}{4} = \frac{3}{8} \]

Is her answer correct? Explain why.
Practice 5  Adding and Subtracting Like Fractions
Complete the model. Add the fractions.

Example

\[
\frac{1}{5} + \frac{2}{5} = \frac{3}{5}
\]

1.

\[
\frac{1}{5} + \frac{2}{5} = \frac{3}{5}
\]

2.

\[
\frac{1}{5} + \frac{2}{5} = \frac{3}{5}
\]

3.

\[
\frac{1}{5} + \frac{2}{5} = \frac{3}{5}
\]
Appendix I
Level 4 & 5

Complete.

4. [Diagram of fraction bars with a question mark]

\[ \frac{\ }{\ } + \frac{\ }{\ } + \frac{\ }{\ } = \frac{\ }{\ } \]

5. [Diagram of fraction bars with a question mark]

\[ \frac{\ }{\ } + \frac{\ }{\ } + \frac{\ }{\ } = \frac{\ }{\ } \]

6. [Diagram of fraction bars with a question mark]

\[ \frac{\ }{\ } + \frac{\ }{\ } + \frac{\ }{\ } = \frac{\ }{\ } \]

7. [Diagram of fraction bars with a question mark]

\[ \frac{\ }{\ } + \frac{\ }{\ } + \frac{\ }{\ } = \frac{\ }{\ } \]
Appendix I

Level 4 & 5

Complete the model. Subtract the fractions.

Example

\[ \frac{2}{6} - \frac{2}{6} = \frac{3}{6} \]

8.

\[ \frac{5}{5} - \frac{5}{5} = \]

9.

\[ \frac{?}{5} - \frac{?}{5} = \]
Appendix I
Level 2 & 3

Practice 5  Adding and Subtracting Like Fractions
Complete the model. Add the fractions.

Example

\[
\frac{1}{5} + \frac{2}{5} = \frac{3}{5}
\]

1.

\[
\frac{5}{5} + \frac{5}{5} = \frac{3}{5}
\]

2.

\[
\frac{1}{5} + \frac{2}{5} = \frac{3}{5}
\]

3.

\[
\frac{1}{5} + \frac{2}{5} = \frac{3}{5}
\]
Appendix I

Level 2 & 3

Complete.

4. 

5. 

6. 

7. 

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Practice 5 Adding and Subtracting Like Fractions

Complete the model. Add the fractions.

Example

\[
\frac{1}{5} + \frac{2}{5} = \frac{3}{5}
\]

1. \[
\frac{1}{5} + \frac{1}{5} = \frac{2}{5}
\]

2. \[
\frac{2}{5} + \frac{2}{5} = \frac{4}{5}
\]

3. \[
\frac{3}{5} + \frac{1}{5} = \frac{4}{5}
\]
Complete.

4. 

\[
\begin{array}{c}
\text{\includegraphics[width=2cm]{image1.png}} \\
\text{?}
\end{array}
\]

\[
\begin{array}{c}
\text{\includegraphics[width=2cm]{image2.png}} \\
\end{array}
\]

5. 

\[
\begin{array}{c}
\text{\includegraphics[width=2cm]{image3.png}} \\
\text{?}
\end{array}
\]

\[
\begin{array}{c}
\text{\includegraphics[width=2cm]{image4.png}} \\
\end{array}
\]
1.) John and Maria were hungry and decided to order a pizza for dinner. They ordered a large pizza that had 10 slices. John was the hungriest and ate 5 slices and Maria ate 3 slices. What fraction of the pizza was eaten?

Answer:

2.) Thomas ate 4/6 of a pizza. Miguel ate 1/6 of the pizza. How much more did Thomas eat than Miguel?

Answer:

3.) Sally ate 3/5 of the pizza and Sam ate two-fifths of the pizza. How much of the pizza did they eat all together?

Answer:
Appendix J

Level 5

4.) Jorge put 1/3 pounds of mushrooms on the pizza and 2/3 pepperoni on the pizza. How many more pounds of pepperoni did Jorge put on the pizza?

Answer:

5.) There were 4 out of 7 pieces of pizza left over in the box. Ben came home and ate 1 piece and then Jill came home and ate another piece. What fraction of the pizza is left?

Answer:
1.) John and Maria were hungry and decided to order a pizza for dinner. They ordered a large pizza that had 10 slices. John was the hungriest and ate 5 slices and Maria ate 3 slices. What fraction of the pizza was eaten?

Answer: ________ of the pizza was eaten.

2.) There were 4 out of 7 pieces of pizza left over in the box. Ben came home and ate 1 piece and then Jill came home and ate another piece. What fraction of the pizza is left?

Answer: ________ of the pizza is left.
3.) Sally ate 3/5 of the pizza and Sam ate two-fifths of the pizza. How much of the pizza did they eat all together?

Answer: Sally and Sam ate ______ of the pizza.

4.) Jorge put 1/3 pounds of mushrooms on the pizza and 2/3 pepperoni on the pizza. How many more pounds of pepperoni than mushrooms did Jorge put on the pizza?

Answer: Jorge put ______ more pounds of pepperoni than mushrooms.

5.) Thomas ate 4/6 of a pizza. Miguel ate 1/6 of the pizza. How much more did Thomas eat than Miguel?

Answer: Thomas ate ______ more than Miguel.
1. John and Maria were hungry and decided to order a pizza for dinner. They ordered a large pizza that had 10 slices. John was the hungriest and ate 5 slices and Maria ate 3 slices. What fraction of the pizza was eaten?

Answer: ________ of the pizza was eaten.

2. Thomas ate 4/6 of a pizza. Miguel ate 1/6 of the pizza. How much more did Thomas eat than Miguel?

Answer: Thomas ate ________ more than Miguel.
3.) Sally ate \( \frac{3}{5} \) of the pizza and Sam ate two-fifths of the pizza. How much of the pizza did they eat all together?

Answer: Sally and Sam ate _______ of the pizza.

4.) Jorge put \( \frac{1}{3} \) pounds of mushrooms on the pizza and \( \frac{2}{3} \) pounds of pepperoni on the pizza. How many more pounds of pepperoni than mushrooms did Jorge put on the pizza?

Answer: Jorge put _______ more pounds of pepperoni than mushrooms.
1.) John and Maria ordered a pizza. The pizza had 10 slices. John ate 5 slices and Maria ate 3 slices. **What fraction of the pizza was eaten?**

Answer: _______ of the pizza was eaten.

2.) Thomas ate \(\frac{4}{6}\) of a pizza. Miguel ate \(\frac{1}{6}\) of the pizza. **How much more** did Thomas eat than Miguel?

Answer: Thomas ate _______ more than Miguel.
3.) Sally ate $\frac{3}{5}$ of the pizza and Sam ate two-fifths of the pizza. How much of the pizza did they eat all together?

Answer: Sally and Sam ate ______ of the pizza.

4.) Jorge put $\frac{1}{3}$ pounds of mushrooms on the pizza and $\frac{2}{3}$ pounds of pepperoni on the pizza. How many more pounds of pepperoni than mushrooms did Jorge put on the pizza?

Answer: Jorge put ______ more pounds of pepperoni than mushrooms.
1.) The pizza had 10 slices.
   John ate 5 slice
   Maria ate 3 slices

   What fraction of the pizza was eaten?

   Answer: _______ of the pizza was eaten.

2.) Thomas ate $\frac{4}{6}$ of a pizza.
    Miguel ate $\frac{1}{6}$ of the pizza.

   How much more did Thomas eat than Miguel?

   Answer: Thomas ate _______ more than Miguel.
3.) Sally ate $\frac{3}{5}$ of the pizza
   Sam ate two-fifths of the pizza.

How much of the pizza did they eat all together?

Answer: Sally and Sam ate _______ of the pizza.
Steps to Solve a Math Word problem

1. Read the problem 2 times
2. Highlight the question
3. Circle key words and information.
4. Draw a picture.
5. Choose which operation to use: + -
6. Write a math equation: \( 4 + 2 = 6 \)
7. Solve
How do you know whether to **add** or **subtract**?

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<thead>
<tr>
<th>Addition Words</th>
<th>altogether, in all, plus, sum, total</th>
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<tbody>
<tr>
<td>+</td>
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<table>
<thead>
<tr>
<th>Subtraction Words</th>
<th>difference, how much left, how many fewer, minus</th>
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Lesson 3
<table>
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<th>Level 5</th>
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<tr>
<td><strong>Language Objectives</strong></td>
<td>and write the equation of a set.</td>
<td>and write the equation of a set.</td>
<td>and write the equation of a set.</td>
<td>and write the equation of a set.</td>
<td>and write the equation of a set.</td>
</tr>
<tr>
<td><strong>Content Objectives</strong></td>
<td>I. Students will be able to read, write, and identify equations of a set.</td>
<td>I. After whole group discussion and guided practice, students will be able to identify and write equations of a set.</td>
<td>Students will be able to identify and write equations of a set.</td>
<td>Students will be able to identify and write equations of a set.</td>
<td>Students will be able to identify and write equations of a set.</td>
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</table>

**Topic:** Identify Equations of a Set

<table>
<thead>
<tr>
<th>Action of a Set</th>
<th>Topic: Identify Equations of a Set</th>
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</thead>
<tbody>
<tr>
<td>Level 1</td>
<td>Read/Write</td>
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<td>Read/Write</td>
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<td>Words</td>
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<tr>
<td>---------</td>
<td>-------</td>
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<tr>
<td>nouns, verbs</td>
<td>Identified as a set of objects is a group of a larger group is a part of a larger group that is a part of a larger group in its numerator and when a fraction is in its simplest form.</td>
</tr>
</tbody>
</table>

**Function**

Functional Language Chart
Lesson 3: Fractions of a Set

Materials:

- Student Book 3B pp. 151-155 (Appendix O)
- Teacher Edition B pp. 151-155

Supplemental Materials:

- Fraction of a Set Worksheets Levels 1-5 Activity (Appendix P)
- Fractions of a Set Vocabulary Answers (Appendix Q)
- Fractions of a Set Vocabulary Student Worksheets (Appendix R)

Lesson Vocabulary:

- whole
- set
- part
- simplest form

Lesson Overview:

Building Background (15 minutes)

1. Students will begin by learning to identify whole and sets.

   - Show students a picture of a single item, for example a cake, and say: This is a whole cake.
   - Then show students a picture of several cakes and say: This is a set of cakes.
   - Continue with other items and have students say if the picture shows a whole or a set.

Building Vocabulary:

Note- These are familiar vocabulary words from other lessons.

Explain to students the importance of understanding the vocabulary when solving the problems in this chapter. Pass out the Fractions of a Set Vocabulary Student Worksheet (Appendix R) based on students’ level. Explain the directions of how to fill out a 4-Corners Vocabulary sheet. Model how to fill in the first vocabulary word and do together. Then give students 10 minutes to fill in the rest the best they can. On an overhead or smartboard display the empty boxes and fill in the remaining answers together. Ask students to share their answers. Answers will vary. Show students teacher completed chart (Appendix Q) and leave on display for the remaining of the lesson.
Real World Scenario-

Next, assign students to heterogeneous groups of five. Students will talk together to come up an answer. One person will report out.

Ask the following questions-

- What fraction of your group have blue eyes? (teacher points to eyes)
- What fraction of your group is boys?
- What fraction of your group wears glasses? (teacher points to glasses)

(Answers should be for example 2 out of 5 or two-fifths)

Lesson (40 minutes)

2. **Teach- Use Pictures to Show Fractions as Part of a Set of Objects**
   (Students interpret a fraction as part of a set of objects)

   - Refer students to the picture of a set of apples in Student Book B p. 151
     (Appendix O)
   - **Ask:** What fraction of the apple are red? (3/4) What fraction of the apples are green? (1/4)
   - **Guided Practice** (p. 151) Guide students to understand how to read, write, and identify fractions of a set by scaffolding how to do problems 1-4. (Emphasize that the whole is a set of objects and the parts are the individual objects).

3. **Learn- Find the Fraction of a Part of Objects**
   (Students extend their knowledge of finding a fraction of a set to a set of objects divided into equal subsets).

   - Refer students to the picture of a set of 12 apples in Student Book B p. 152.
     (Appendix O)
   - Point out that the set of 12 apples has been divided into 4 equal groups and 3 groups out of the 4 groups are red apples.
   - **Ask-** What fraction of the apples are red? (9/12 or 3/4)
   - Point out that the fraction of red apples can be represented as 9/12. Remind students to express their answer in simplest form. (Refer them to Appendix Q)
   - **Guided Practice** (p. 152) Guide students to understand the concept of fraction of a set by scaffolding how to do problems 5, 6, 7 in the Student Book.

4. **Learn- Finding the Fractional part of a Set**
   (Students are introduced to how the part-whole bar model is used to represent the fraction of a set)
- Have students look at the concrete representation (plates) in Student Book B p. 153. (Appendix O) Guide students to see how this has been translated into the bar model.

- **Say-** Since \( \frac{3}{4} \) of the plates are blue, you need to divide the bar into 4 equal parts and shade 3 of the parts. Student should realize that each part is an equal subset of the whole set of 20 plates.

- **Say-** 4 parts of the bar model represent 20 plates, \( \frac{3}{4} \) of 20 is 3 out of the 4 equal parts.

- Review the unitary method, Guide and scaffolding through the problem. (Write on the chart paper and leave visible for the remaining of the lesson)
  Write:

  4 units → 20

  1 unit → 20 \( \div 4 = 5 \) (1/4 of the bar represents 5.)

  3 units → 5 \( \times 3 = 15 \) (3/4 of the bar represents 15.)

  So, \( \frac{3}{4} \) of 20 is 15.

  15 plates are blue.

- **Guided Practice** (p. 153 and 154) (Appendix O) Guide students to apply the concept of a fraction of a set with scaffolding and support.

- Have students complete the Let's Practice section on p. 154-155 with a partner.

- Have students complete Fractions of a Set Worksheet (Appendix P) based on their level.

*Assess students’ understanding by correcting Appendix P after the lesson.

**Closure (5 minutes)**

5. In a whole group, remind students of the key vocabulary used in in the lesson today. Read one of the vocabulary words along with its definition. (Be referring to Appendix Q). Ask students to volunteer and read another vocabulary word and definition that was either from Appendix Q or Appendix R (they will have in front on them at their desk. Repeat until there are no more volunteers.
Narrative of Modifications

In this lesson, I focused a lot on vocabulary because it is such an important piece in order to be successful when solving fractions of a set world problems. I found it essential to create an activity on the key words before the bulk of the lesson began. I started the vocabulary in the beginning because these are review words and ones that the students should be comfortable with. I also felt that when students create their own definitions or draw their own diagrams or pictures the word becomes more meaningful and comprehensible. The reason I did not have students work with partners on this activity, is because the teacher provides a model shortly after. Students should not feel threatened to fill in all the boxes if they run out of time. As the proficiency level of the student went lower, I provided more support with additional information filled in. The original lesson had the teacher show just a picture of a cake to describe whole. I decided to take this out and dive farther into the key vocabulary for this lesson.

The next modification I made was the real-world group activity to build background in the topic of fractions of a set. Originally the lesson had a similar activity later on in the lesson for the ELs in the classroom. My thought was to include this in the beginning for all learners, to get them thinking about what the lesson will be on. This is the “doing” part of the lesson before the actual teaching that has the students interacting in groups and out of their seats. I envision this activity to create an enthusiastic learning environment for the remainder of the lesson.

The largest modification was the workbook pages that the students needed to complete. Changes I made for lower level proficiency students included picture support, partially filled in number support, less challenging problems, and less number of problems. Because this content is new and may be overwhelming for students, I found it necessary to adjust the tasks. My guess is
that many of the students will need a lot of teacher support while completing the workbook pages and also numerous lessons on this concept with scaffolding and practice.
Lesson 14.6 Fraction of a Set

Lesson Objectives
• Read, write, and identify fractions of a set.
• Find the number of items in a fraction of a set.

Learn
Use pictures to show fractions as part of a set of objects.

There are 4 apples.
3 out of the 4 apples are red.

What fraction of the apples are red?
\[
\frac{3}{4}
\]
of the apples are red.

Guided Practice
Find the fractions of a set.
There are 10 flowers.

1. What fraction of the flowers are red?

2. What fraction of the flowers are purple?

3. What fraction of the flowers are yellow?

4. What fraction of the flowers are not red?
Appendix O

Find the fraction of a part of objects.

Here is a set of 12 apples.
The set of apples is divided into 4 equal groups.
3 out of 4 groups of apples are red.

$\frac{3}{4}$ is 3 out of 4 equal groups.

What fraction of the apples is red?

$\frac{3}{4}$ of the apples are red.

Guided Practice

Complete.

5 The set of ducks is divided into equal groups.

6 What fraction of the ducks are yellow?

of the ducks are yellow.

7 What fraction of the ducks are purple?

of the ducks are purple.
Find the fractional part of a set.

There are 20 plates in the set.  
15 of the 20 plates are blue.  
\(\frac{3}{4}\) of the plates are blue.  
So, \(\frac{3}{4}\) of 20 is 15.

The shaded parts in the bar model show \(\frac{3}{4}\) of the set.

Find \(\frac{3}{4}\) of 20.

- 4 units \(\rightarrow\) 20
- 1 unit \(\rightarrow\) \(20 \div 4 = 5\)
- 3 units \(\rightarrow\) \(5 \times 3 = 15\)
So, \(\frac{3}{4}\) of 20 is 15.

Guided Practice

Complete.

8 John has 20 toy cars.  
\(\frac{3}{5}\) of the toy cars are yellow.  
How many toy cars are yellow?

\(\square\) \(\frac{3}{5}\) of 20 toy cars are yellow.
9 Find $\frac{3}{5}$ of 20 to find how many cars are yellow.

Draw a bar model. Divide it into 5 parts. Shade 3 parts.

5 units →
1 unit →
3 units →
So, $\frac{3}{5}$ of 20 =

[toy cars are yellow.]

Let's Practice

Solve.
There are 15 fruits.

1 What fraction of the fruits are peaches?

2 What fraction of the fruits are strawberries?
Appendix O

**Complete.**

3 Which of the following sets shows the fraction $\frac{3}{4}$?

![Set 1](image1)

![Set 2](image2)

![Set 3](image3)

4 Jerry has 15 granola bars.

$\frac{2}{3}$ of them were eaten by his friends.

How many granola bars did his friends eat?

Find $\frac{2}{3}$ of 15 to find how many granola bars his friends ate.

![Fraction model](image4)

3 units →

1 unit →

2 units →

So, $\frac{2}{3}$ of 15 =

His friends ate granola bars.

---

Go to Workbook B:
Practice 6, pages 113-116
What fraction of each set of objects is shaded?
Fill in the blanks.

1.

2.

3.
Appendix P
Level 5

4.
Fill in the blanks.

Example
Find $\frac{1}{2}$ of 12.

\[
\begin{align*}
\text{2 units} & \rightarrow 12 \\
\text{1 unit} & \rightarrow 12 \div 2 = 6 \\
\text{So, } \frac{1}{2} \text{ of } 12 & = 6
\end{align*}
\]

5. Find $\frac{2}{3}$ of 15.

\[
\begin{align*}
\text{3 units} & \rightarrow \\
\text{1 unit} & \rightarrow 15 \div 3 = \\
\text{2 units} & \rightarrow \quad \times 2 = \\
\text{So, } \frac{2}{3} \text{ of } 15 & = 
\end{align*}
\]
6. Find \(\frac{3}{4}\) of 24.

\[
\begin{align*}
4 \text{ units} & \rightarrow \underline{\quad} \\
1 \text{ unit} & \rightarrow 24 \div 4 = \underline{\quad} \\
3 \text{ units} & \rightarrow \underline{\quad} \times 3 = \underline{\quad} \\
\text{So, } \frac{3}{4} \text{ of } 24 & = \underline{\quad}.
\end{align*}
\]

7. Find \(\frac{2}{5}\) of 20.

\[
\begin{align*}
5 \text{ units} & \rightarrow \underline{\quad} \\
1 \text{ unit} & \rightarrow 20 \div 5 = \underline{\quad} \\
2 \text{ units} & \rightarrow \underline{\quad} \times 2 = \underline{\quad} \\
\text{So, } \frac{2}{5} \text{ of } 20 & = \underline{\quad}.
\end{align*}
\]
Appendix P
Level 5

8. \( \frac{3}{4} \) of the 16 apples are green.
   How many apples are green?  

9. \( \frac{5}{8} \) of the 24 soccer balls were used.
   How many soccer balls were used?  

What fraction of each set of objects is shaded? Fill in the blanks.

1.  
   [Diagram of stars]
   ______

2.  
   [Diagram of envelopes]
   ______

3.  
   [Diagram of buttons]
   ______
Appendix P
Level 4

4.

Fill in the blanks.

Example

Find $\frac{1}{2}$ of 12.

2 units $\rightarrow$ 12

1 unit $\rightarrow$ $12 \div 2 = 6$

So, $\frac{1}{2}$ of 12 = ______________

5.

Find $\frac{2}{3}$ of 15.

3 units $\rightarrow$ ______________

1 unit $\rightarrow$ $15 \div 3 = _________$

2 units $\rightarrow$ ___________ $\times 2 = _________$

So, $\frac{2}{3}$ of 15 = ___________.
6. Find \( \frac{3}{4} \) of 24.

\[
\begin{align*}
\text{4 units} & \rightarrow \underline{\phantom{0000}} \\
\text{1 unit} & \rightarrow 24 \div 4 = \underline{\phantom{000}} \\
\text{3 units} & \rightarrow \underline{\phantom{0000}} \times 3 = \underline{\phantom{000}} \\
\text{So,} \quad \frac{3}{4} \text{ of 24} & = \underline{\phantom{000}}.
\end{align*}
\]

7. Find \( \frac{2}{5} \) of 20.

\[
\begin{align*}
\text{5 units} & \rightarrow \underline{\phantom{0000}} \\
\text{1 unit} & \rightarrow 20 \div 5 = \underline{\phantom{000}} \\
\text{2 units} & \rightarrow \underline{\phantom{0000}} \times 2 = \underline{\phantom{000}} \\
\text{So,} \quad \frac{2}{5} \text{ of 20} & = \underline{\phantom{000}}.
\end{align*}
\]
8. \( \frac{3}{4} \) of the 16 apples are green.
   How many apples are green? □

9. \( \frac{5}{8} \) of the 24 soccer balls were used.
   How many soccer balls were used? □
What fraction of each set of objects is shaded? Fill in the blanks.

1. 

2. 

3. 

______
Appendix P
Level 3

4.

Fill in the blanks.

Example

Find $\frac{1}{2}$ of 12.

\[
\begin{align*}
2 \text{ units} & \rightarrow 12 \\
1 \text{ unit} & \rightarrow 12 \div 2 = 6 \\
\text{So, } \frac{1}{2} \text{ of } 12 & = 6 
\end{align*}
\]

Draw a bar model. Divide it into 2 parts. Shade 1 part.

5.

Find $\frac{2}{3}$ of 15.

\[
\begin{align*}
3 \text{ units} & \rightarrow \\
1 \text{ unit} & \rightarrow 15 \div 3 = \\
2 \text{ units} & \rightarrow \_ \times 2 = \\
\text{So, } \frac{2}{3} \text{ of } 15 & = 
\end{align*}
\]
6. Find \( \frac{3}{4} \) of 24.

\[
\begin{align*}
4 \text{ units} & \rightarrow \_ \_ \_ \_ \\
1 \text{ unit} & \rightarrow 24 \div 4 = \_ \_ \_ \_ \\
3 \text{ units} & \rightarrow \_ \_ \_ \_ \times 3 = \_ \_ \_ \_ \\
\text{So, } \frac{3}{4} \text{ of } 24 & = \_ \_ \_ \_ .
\end{align*}
\]

7. Find \( \frac{2}{5} \) of 20.

\[
\begin{align*}
5 \text{ units} & \rightarrow \_ \_ \_ \_ \\
1 \text{ unit} & \rightarrow 20 \div 5 = \_ \_ \_ \_ \\
2 \text{ units} & \rightarrow \_ \_ \_ \_ \times 2 = \_ \_ \_ \_ \\
\text{So, } \frac{2}{5} \text{ of } 20 & = \_ \_ \_ \_ .
\end{align*}
\]
Appendix P
Level 2

What fraction of each set of objects is shaded?
Fill in the blanks.

1.  
   
   
   

2.  
   

3.  
   


Appendix P

Level 2

4. Fill in the blanks.

Example

Find \( \frac{1}{2} \) of 12.

Draw a bar model.
Divide it into 2 parts.
Shade 1 part.

\[
\begin{align*}
\text{2 units} & \quad \rightarrow \quad 12 \\
\text{1 unit} & \quad \rightarrow \quad 12 \div 2 = 6 \\
\text{So, } \frac{1}{2} \text{ of } 12 & \quad = \quad 6
\end{align*}
\]

5. Find \( \frac{2}{3} \) of 15.

\[
\begin{align*}
\text{3 units} & \quad \rightarrow \quad 15 \\
\text{1 unit} & \quad \rightarrow \quad 15 \div 3 = 5 \\
\text{2 units} & \quad \rightarrow \quad 5 \times 2 = \_\_\_\_\_\_\_ \\
\text{So, } \frac{2}{3} \text{ of } 15 & \quad = \quad \_\_\_\_\_\_\_.
\end{align*}
\]
6. Find \( \frac{3}{4} \) of 24.

\[ \frac{3}{4} \times 24 = \frac{3 \times 24}{4} = 18 \]

So, \( \frac{3}{4} \) of 24 = 18.

7. Find \( \frac{2}{5} \) of 20.

\[ \frac{2}{5} \times 20 = \frac{2 \times 20}{5} = 8 \]

So, \( \frac{2}{5} \) of 20 = 8.
What fraction of each set of objects is shaded? Circle the correct answer

1. 1/3 or 1/8

2. 1/4 or 3/4

3. 2/5 or 3/5
Appendix P
Level 1

4. Fill in the blanks.

Example
Find \( \frac{1}{2} \) of 12.

\[
\begin{align*}
\text{2 units} & \rightarrow 12 \\
\text{1 unit} & \rightarrow 12 \div 2 = 6 \\
\text{So, } \frac{1}{2} \text{ of } 12 & = 6
\end{align*}
\]

5. Find \( \frac{2}{3} \) of 15.

\[
\begin{align*}
\text{3 units} & \rightarrow 15 \\
\text{1 unit} & \rightarrow 15 \div 3 = 5 \\
\text{2 units} & \rightarrow 5 \times 2 = \underline{10} \\
\text{So, } \frac{2}{3} \text{ of } 15 & = \underline{10}.
\end{align*}
\]
## Fractions of a Set

### Vocabulary

1. **Illustration/Example**
   ![Whole cake](image)

   **Sentence**
   
   This is a whole cake.

   **Definition**
   
   A set of objects

   **Vocabulary Word**
   
   whole

2. **Illustration/Example**
   ![Set of cars](image)

   **Sentence**
   
   This is a set of cars.

   **Definition**
   
   A group or a collection of objects.

   **Vocabulary Word**
   
   set
### Appendix Q

#### 3.

<table>
<thead>
<tr>
<th>Illustration/Example</th>
<th>Sentence</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Cars" /></td>
<td>The cars are broken up into 3 equal parts.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Definition</th>
<th>Vocabulary Word</th>
</tr>
</thead>
<tbody>
<tr>
<td>A group of items that is part of a larger group.</td>
<td>part</td>
</tr>
</tbody>
</table>

#### 4.

<table>
<thead>
<tr>
<th>Illustration/Example</th>
<th>Sentence</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\frac{2}{4} = \frac{1}{2}$</td>
<td>$2/4$ can be simplified to $1/2$.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Definition</th>
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</tr>
</thead>
<tbody>
<tr>
<td>A fraction is in its simplest form when the numerator and denominator cannot be any smaller.</td>
<td>simplest form</td>
</tr>
</tbody>
</table>
## Fractions of a Set

### Vocabulary

1. **Illustration/Example**

<table>
<thead>
<tr>
<th>Sentence</th>
</tr>
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<tbody>
<tr>
<td>This is a whole cake.</td>
</tr>
</tbody>
</table>

<table>
<thead>
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</thead>
<tbody>
<tr>
<td>Vocabulary Word</td>
</tr>
<tr>
<td>whole</td>
</tr>
</tbody>
</table>

2. **Illustration/Example**

<table>
<thead>
<tr>
<th>Sentence</th>
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<td></td>
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<table>
<thead>
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</thead>
<tbody>
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</tr>
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<td>set</td>
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</tbody>
</table>
### Appendix R

**Level 5**

3.  

<table>
<thead>
<tr>
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### Fractions of a Set

**Vocabulary**

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<td>A set of objects</td>
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2.

<table>
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<th>Sentence</th>
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<td><img src="image" alt="Illustration" /></td>
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<td>----------------------</td>
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<td>2/4 can be simplified to 1/2.</td>
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**Vocabulary**

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<td><img src="image" alt="Image of cars" /></td>
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### Appendix R
#### Level 1 & 2

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<th>Illustration/Example</th>
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<tbody>
<tr>
<td>[Image of cars divided into 3 equal parts]</td>
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Checklists
## TSL 518: Sheltered ELL Strategies Checklist

Write the page numbers and any other identifying features to identify those parts of your lessons that employ the following strategies.

<table>
<thead>
<tr>
<th>SHELTERED STRATEGIES</th>
<th>Lesson 1</th>
<th>Lesson 2</th>
<th>Lesson 3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>I. Contextualize Lesson</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I.A. Build and Activate Background Knowledge</td>
<td>Lesson 1 Lesson Plan</td>
<td>Lesson 2 Lesson Plan</td>
<td>Lesson 3 Lesson Plan</td>
</tr>
<tr>
<td>I.B. Develop Vocabulary</td>
<td>Lesson 1 Appendix F</td>
<td>Lesson 2 Appendix N</td>
<td>Lesson 3 Appendix R</td>
</tr>
<tr>
<td>I.C. Use extensive Visuals, Realia, Manipulatives, &amp; Gestures</td>
<td>Lesson 1 Appendices C and F</td>
<td>Lesson 2 Appendix K</td>
<td>Lesson 3 Appendix P</td>
</tr>
<tr>
<td>I.D. Model (Instructions, Processes)</td>
<td>Lesson 1 Lesson Plan</td>
<td>Lesson 2 Lesson Plan</td>
<td>Lesson 3 Lesson Plan</td>
</tr>
<tr>
<td>I.E. Create Opportunities To Negotiate Meaning</td>
<td>Lesson 1 Lesson Plan</td>
<td>Lesson 2 Lesson Plan</td>
<td></td>
</tr>
<tr>
<td><strong>II. Make Text Comprehensible</strong></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>II.A. Intentional Use of Graphic Organizers</td>
<td></td>
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<tr>
<td>II.B. Modify Written Text</td>
<td>Lesson 1 Appendix D</td>
<td>Lesson 2 Appendix J</td>
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## Appendix A

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<th>Plan 1</th>
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## Appendix A

### Unit- Fractions
Grammar and Functions Checklist

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<tr>
<th>Grammar</th>
<th>Lesson</th>
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<tbody>
<tr>
<td>Nouns</td>
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<tr>
<td>Adjectives</td>
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<tr>
<td>Verbs</td>
<td>2, 3</td>
</tr>
<tr>
<td>Comparative Adjectives</td>
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<table>
<thead>
<tr>
<th>Functions</th>
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<tbody>
<tr>
<td>Compare</td>
<td>1</td>
</tr>
<tr>
<td>Add</td>
<td>2</td>
</tr>
<tr>
<td>Subtract</td>
<td>2</td>
</tr>
<tr>
<td>Identify</td>
<td>3</td>
</tr>
<tr>
<td>Read</td>
<td>2, 3</td>
</tr>
<tr>
<td>Write</td>
<td>1, 2, 3</td>
</tr>
</tbody>
</table>
Lesson Objectives
- Compare and order fractions.
- Show fractions as points or distances on a number line.
- Compare and order fractions using benchmark fractions.

Vocabulary
benchmark
like fractions
unlike fractions

Learn
Compare fractions using pictures and number lines.
Zoe served \( \frac{1}{2} \) of a vegetarian pie.

Lisa served \( \frac{3}{4} \) of an equal-sized vegetarian pie.

Abby served \( \frac{1}{4} \) of another equal-sized vegetarian pie.

Lisa had a bigger part than Zoe. \( \frac{3}{4} > \frac{1}{2} \).

Abby had a smaller part than Zoe. \( \frac{1}{4} < \frac{1}{2} \).
Appendix B

The number lines show $\frac{1}{2} \cdot \frac{1}{4}$, and $\frac{3}{4}$.

From the number lines, $\frac{3}{4}$ is greater than $\frac{1}{2}$.
\[\frac{1}{4}\] is less than $\frac{1}{2}$.

Guided Practice

Compare the fractions.

1. \[
\begin{array}{c}
\text{\frac{5}{6}} \\
\text{\frac{1}{2}}
\end{array}
\]

is greater than \[
\begin{array}{c}
\text{\frac{1}{4}}
\end{array}
\].

2. \[
\begin{array}{c}
\text{\frac{7}{8}} \\
\text{\frac{1}{2}}
\end{array}
\]

is less than \[
\begin{array}{c}
\text{\frac{3}{4}}
\end{array}
\].

Copy the number lines on grid paper.

Mark and label the fractions $\frac{1}{3} \cdot \frac{2}{3} \cdot \frac{1}{4}$, and $\frac{3}{4}$ on the appropriate number line.

Use your number lines from 3 to compare. Choose $>$ or $<$.

4. \[
\begin{array}{c}
\frac{2}{3} \\
\frac{3}{4}
\end{array}
\]

5. \[
\begin{array}{c}
\frac{1}{3} \\
\frac{1}{4}
\end{array}
\]
Lesson Objectives

- Add two or three like fractions with sums to 1.
- Subtract a like fraction from another like fraction or one whole.

Add like fractions.

Jerome ate $\frac{1}{7}$ of an omelet.

His brother Randy ate $\frac{5}{7}$ of it.

What fraction of the omelet did they eat altogether?

\[
\frac{1}{7} + \frac{5}{7} = \frac{6}{7}
\]

They ate $\frac{6}{7}$ of the omelet altogether.
Appendix B

Guided Practice

Complete.

1. Add $\frac{2}{6}$ and $\frac{3}{6}$.

$$\frac{2}{6} + \frac{3}{6} = \_\_\_$$

Subtract like fractions.

Yvonne hiked $\frac{2}{7}$ of a forest trail before lunch.
She hiked again after lunch.
By the end of the day, she had hiked $\frac{6}{7}$ of the trail.
What fraction of the trail did Yvonne hike after lunch?

$$\frac{6}{7} - \frac{2}{7} = \frac{4}{7}$$

Yvonne hiked $\frac{4}{7}$ of the forest trail after lunch.
Appendix B

2  \[ 1 - \frac{3}{5} = ? \]

\[ \text{1 whole} = \frac{5}{5} \]

1 \[ 1 - \frac{3}{5} = \frac{5}{5} - \frac{3}{5} = \]

Let's Practice

Add or subtract.

1  \[ \frac{6}{11} + \frac{5}{11} = \]

2  \[ \frac{1}{12} + \frac{3}{12} + \frac{5}{12} = \]

3  \[ \frac{7}{8} - \frac{4}{8} = \]

4  \[ 1 - \frac{1}{6} - \frac{3}{6} = \]

ON YOUR OWN

Go to Workbook B:
Practice 5, pages 107–112

READING AND WRITING MATH

Math Journal

Rachel is adding like fractions.

This is what she writes:

\[ \frac{2}{4} + \frac{1}{4} = \frac{3}{8} \]

Is her answer correct? Explain why.
Lesson Objectives

- Read, write, and identify fractions of a set.
- Find the number of items in a fraction of a set.

Learn

Use pictures to show fractions as part of a set of objects.

There are 4 apples.
3 out of the 4 apples are red.

What fraction of the apples are red?
\[ \frac{3}{4} \text{ of the apples are red.} \]

Guided Practice

Find the fractions of a set.

There are 10 flowers.

1. What fraction of the flowers are red?
2. What fraction of the flowers are purple?
3. What fraction of the flowers are yellow?
4. What fraction of the flowers are not red?
Appendix B

**Learn**

Find the fraction of a part of objects.

Here is a set of 12 apples.
The set of apples is divided into 4 equal groups.
3 out of 4 groups of apples are red.

\[ \frac{3}{4} \] is 3 out of 4 equal groups.

What fraction of the apples is red?

\[ \frac{3}{4} \] of the apples are red.

**Guided Practice**

**Complete.**

5 The set of ducks is divided into [ ] equal groups.

6 What fraction of the ducks are yellow?

[ ] of the ducks are yellow.

7 What fraction of the ducks are purple?

[ ] of the ducks are purple.
Find the fractional part of a set.

There are 20 plates in the set. 15 of the 20 plates are blue. \(\frac{3}{4}\) of the plates are blue.

So, \(\frac{3}{4}\) of 20 is 15.

The shaded parts in the bar model show \(\frac{3}{4}\) of the set.

Find \(\frac{3}{4}\) of 20.

4 units \(\rightarrow\) 20
1 unit \(\rightarrow\) \(\frac{20}{4} = 5\)
3 units \(\rightarrow\) \(5 \times 3 = 15\)
So, \(\frac{3}{4}\) of 20 is 15.

Guided Practice

Complete.

8 John has 20 toy cars. \(\frac{3}{5}\) of the toy cars are yellow. How many toy cars are yellow?

8 toy cars are yellow.
Appendix B

Find \( \frac{3}{5} \) of 20 to find how many cars are yellow.

Draw a bar model. Divide it into 5 parts. Shade 3 parts.

5 units  
1 unit  
3 units  
So, \( \frac{3}{5} \) of 20 =   

toy cars are yellow.

Let’s Practice

Solve.
There are 15 fruits.

1 What fraction of the fruits are peaches?

2 What fraction of the fruits are strawberries?
Complete.

3 Which of the following sets shows the fraction $\frac{3}{4}$?

4 Jerry has 15 granola bars.
$\frac{2}{3}$ of them were eaten by his friends.
How many granola bars did his friends eat?
Find $\frac{2}{3}$ of 15 to find how many granola bars his friends ate.

$\frac{2}{3}$ of 15 =

His friends ate ______ granola bars.