

# Thank you!

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### Credits:









Test Date:

## Grade 3 Everyday Math: UNIF Fractions Study Guide

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### Unit Vocabulary:

benchmark, collection, denominator, displace, distance, equal shares, equal to, equivalent, fractions greater than one, greater than, less than, liquid volume, liter, milliliter, numerator, unit fraction, volume, whole

### Lesson 7.1:

How do you measure and compare liquid volumes?

1. Circle the container that is most likely to hold 1 liter of liquid.

bathtub sink milk bottle

2. Andrew fills two beakers and pours them into his jar.



There is no room left in his jar. What is the liquid volume of his jar? Exploration A: How do you estimate the number of dots in an array?

\* The small square can cover 112 dots.

\* Estimate the total number of dots in the big square.

About \_\_\_\_\_ dots

Exploration B: How do you measure liquid volume?

\* The amount of liquid that a container holds is \_\_\_\_\_\_

\* Circle the object to the right that would **displace** the most water out of this bucket.





Exploration C: How do you identify equal shares?

Circle the picture to the right that shows equal shares.





Pg. 2

### Lesson 7.3:

How do you solve number stories involving time, mass, volume, and length?

 Jessica fills a beaker with 1,000 milliliters of water. Then she pours some of the water from the beaker to fill a glass. There are 400 milliliters of liquid left in the beaker.

What is the liquid volume of the glass?

Answer: about \_\_\_\_\_ mL (milliliters)

2. One eraser has a mass of about 10 grams. What is the mass of 13 erasers together?

Answer: about \_\_\_\_\_ grams

### Lesson 7.4:

How do you partition fraction strips and use them to name and compare fractions?

1. Catherine uses her fraction strips to compare 1/3 and 2/5.



Catherine writes this number sentence  $\frac{1}{3} > \frac{2}{5}$ .

Do you agree with Catherine?

Use Catherine's fraction strips to help explain your answer.

2. What fraction is the fraction strip showing?



\_ of a fraction strip

3. Partition this fraction strip to show fourths. Label with fractions.

### Lesson 7.5:

How do you represent fractions on number lines?

1. Partition the number line into thirds and label each tick mark.



#### Lesson 7.6:

How do you identify fractions greater than, less than, and equal to one on a number line?

**a.** Fill in the missing thirds on the number line.



- **b.** Draw a point at  $\frac{5}{3}$ .
- c. Is <sup>5</sup>/<sub>3</sub> greater than, less than, or equal to 1? \_\_\_\_\_\_
  How do you know? \_\_\_\_\_\_

### Lesson 7.7:

How do you compare fractions using visual models?

Write >, <, or = to make the number sentence true. The whole is the same for each fraction. You may use your fraction tools.



e. Show how you can compare 2/4 and 1/2 using the number lines below.



### Lesson 7.8:

How do you order fractions with the same numerator?

Look at the fractions below and sort them into two groups: fractions less than 1 and fractions greater than 1. Use the clues below to help you.



Less than 1: The numerator is less than the denominator. Greater than 1: The numerator is greater than the denominator.

$$\frac{1}{6}, \frac{1}{2}, \frac{5}{4}, \frac{4}{3}, \frac{3}{4}, \frac{4}{2}, \frac{9}{7}, \frac{8}{9}$$

Less Than 1	More Than 1

### Lesson 7.9:

How do you locate fractions on a number line?

Billy made a mistake when he labeled 3/3 on the number line below. He crossed out his mistake but needs help to fix it.



### Lesson 7.10:

How do you write a two-step number story to fit a number sentence?

Draw a line from each number sentence to the picture that matches it.



### Lesson 7.II:

How do you solve number stories involving fractions?

**a.** Ryan ran 1/4 of a mile.

Albert ran 1/8 of a mile.

Who ran the greater distance?

Answer:

**b.** Eight friends share 6 pizzas equally.

What fraction of a pizza does each friend get?

### Lesson 7.12:

How do you name fractions of sets of objects?

**a.** Five people share ten marbles. Circle each person's share.



How many marbles does each person get? \_\_\_\_ marbles.

Write the fraction of the total number of marbles that each person gets.

\_\_\_\_ of the marbles

**b.** Lola and Samuel each have 8 blocks.

$$\frac{3}{8}$$
 of Lola's blocks are yellow.

 $\frac{6}{8}$  of Samuel's blocks are yellow.

Shade the blocks to show Lola's and Samuel's yellow blocks.





Who has more yellow blocks?





Name: <u>Answer Key</u>

Test Date:

## Grade 3 Everyday Math: UNIF Fractions Study Guide

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### Unit Vocabulary:

benchmark, collection, denominator, displace, distance, equal shares, equal to, equivalent, fractions greater than one, greater than, less than, liquid volume, liter, milliliter, numerator, unit fraction, volume, whole

### Lesson 7.1:

How do you measure and compare liquid volumes?

1. Circle the container that is most likely to hold 1 liter of liquid.



2. Andrew fills two beakers and pours them into his jar.



There is no room left in his jar. What is the liquid volume of his jar?

Answer: about <u>600</u> mL (milliliters)

### Lesson 7.2:

Exploration A: How do you estimate the number of dots in an array?

\* The small square can cover 112 dots.

\* Estimate the total number of dots in the big square.

About <u>440</u> dots Exactly: 448

Exploration B: How do you measure liquid volume?

\* The amount of liquid that a container holds is <u>liquid</u> <u>volume</u>

\* Circle the object to the right that would **displace** the most water out of this bucket.

Exploration C: How do you identify equal shares?

Circle the picture to the right that shows equal shares.









### Lesson 7.3:

How do you solve number stories involving time, mass, volume, and length?

 Jessica fills a beaker with 1,000 milliliters of water. Then she pours some of the water from the beaker to fill a glass. There are 400 milliliters of liquid left in the beaker.

What is the liquid volume of the glass?

Answer: about <u>600</u> mL (milliliters)

2. One eraser has a mass of about 10 grams. What is the mass of 13 erasers together?

Answer: about 130 grams

### Lesson 7.4:

How do you partition fraction strips and use them to name and compare fractions?

1. Catherine uses her fraction strips to compare 1/3 and 2/5.



Catherine writes this number sentence  $\frac{1}{3} > \frac{2}{5}$ .

Do you agree with Catherine? <u>NO</u>

Use Catherine's fraction strips to help explain your answer.

1/3 is smaller than 2/5 because the 1/3 strip doesn't go as far as two 1/5 strips do.

2. What fraction is the fraction strip showing?



2/3 or two-thirds of a fraction strip

3. Partition this fraction strip to show fourths. Label with fractions.



### Lesson 7.5:

How do you represent fractions on number lines?

1. Partition the number line into thirds and label each tick mark.



#### Lesson 7.6:

How do you identify fractions greater than, less than, and equal to one on a number line?

**a.** Fill in the missing thirds on the number line.



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### Lesson 7.7:

How do you compare fractions using visual models?

Write >, <, or = to make the number sentence true. The whole is the same for each fraction. You may use your fraction tools.



e. Show how you can compare 2/4 and 1/2 using the number lines below.



2/4 is the same distance from 0 as 1/2.

### Lesson 7.8:

How do you order fractions with the same numerator?

Look at the fractions below and sort them into two groups: fractions less than 1 and fractions greater than 1. Use the clues below to help you.



Less than 1: The numerator is less than the denominator. Greater than 1: The numerator is greater than the denominator.

$$\frac{1}{6}, \frac{1}{2}, \frac{5}{4}, \frac{4}{3}, \frac{3}{4}, \frac{4}{2}, \frac{9}{7}, \frac{8}{9}$$

Less Than 1	More Than 1
1/6, 1/2,	5/4, 4/3,
3/4, 8/9	4/2, 9/7

### Lesson 7.9:

How do you locate fractions on a number line?

Billy made a mistake when he labeled 3/3 on the number line below. He crossed out his mistake but needs help to fix it.



**a.** Explain Billy's mistake.

2/3 is between 0 and 1, not to the right of the 1. It is two thirds of

The distance between 0 and 1.

### Lesson 7.10:

How do you write a two-step number story to fit a number sentence?

Draw a line from each number sentence to the picture that matches it.



### Lesson 7.II:

How do you solve number stories involving fractions?

**a.** Ryan ran 1/4 of a mile.

Albert ran 1/8 of a mile.

Who ran the greater distance?

Answer: **Ryan** 

**b.** Eight friends share 6 pizzas equally.

What fraction of a pizza does each friend get?

Answer: <sup>3</sup>/<sub>4</sub> of a pizza (unit)

### Lesson 7.12:

How do you name fractions of sets of objects?

**a.** Five people share ten marbles. Circle each person's share.



Write the fraction of the total number of marbles that each person gets.

2/10 or 1/5 of the marbles

**b.** Lola and Samuel each have 8 blocks.

$$\frac{3}{8}$$
 of Lola's blocks are yellow.

 $\frac{6}{8}$  of Samuel's blocks are yellow.

Shade the blocks to show Lola's and Samuel's yellow blocks.





Who has more yellow blocks? <u>Samuel</u>