Third Grade Answer Key Unit 5: Fractions

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Lesson 4 What is the shaded fraction of the set below?

Lesson 5

Model the fraction below: one-fourth of a set is shaded





Lesson 11

Complete the comparison of the fractions below by drawing a model to compare.



Lesson 12

Tiffany has painted $\frac{1}{3}$ of her patio. Darren, who has the same size patio, has painted $\frac{2}{4}$ of his patio. Who has painted more of their patio? Draw a model to solve.



Lesson 13

Brielle and Wendi planted two gardens of equal size. The fractions below represent how much of each garden they planted. Who has planted more of their garden? Use <, >, or = to write a comparison using the fraction amount planted.



Brielle's Garden Wendi's Garden

Wendi's Garden > Brielle's Garden Answer: _____

Lesson 14

Find a fraction that is equivalent to the one below. Use fraction bars or draw a model to find the answer.



Lesson 15

Are the two points on the number line equivalent? Why or why not? Justify your answer.





Pre-Assessment

Read each problem below and solve.

1. Drake has frogs and fish as pets. What fraction of his pets are fish?



2. Look at the spinner below. What fraction is shaded?



- **3.** Compare the fractions below. Determine if they are <, >, or =. $\frac{4}{6} = \frac{2}{3}$
- **4.** Weston is painting a wall in his living room. What part of the wall has he painted?



5. What fraction is represented by the dot on the number line below?



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Fractions of a Whole

A whole represents one pictorial image (a region).

Write the unit fraction that represents each part of the whole.



Missing Fractions

Write the missing fractions for the points shown below.



Label the missing points on the number lines below. The left edge of the ruler is your starting point, 0.













Fractions Quiz

Solve the problems below. Make sure to show your work and record your answers.

What fraction of the shape is shaded? 2. What fraction of the wood is painted? 1.



- $\frac{1}{3}$ $\frac{1}{3}$ $\frac{1}{3}$ $\frac{1}{3}$
- Which are the missing fractions on 3. the number line below?



4. A farmer gave his horses $\frac{1}{4}$ bale of hay on Friday, Saturday, and Sunday. Which equation below represents how much hay the horses received?

A. $\frac{1}{4} + \frac{1}{4} +$	$\frac{1}{4} = \frac{3}{12}$
B. $\frac{1}{3} + \frac{1}{3} +$	$\frac{1}{3} = \frac{3}{9}$
C. $\frac{1}{4} + \frac{1}{4} +$	$\frac{1}{4} = \frac{3}{4}$
D. $\frac{1}{4} + \frac{2}{4} + \frac{2}{4}$	$\frac{3}{4} = \frac{6}{4}$

Answer: _____

5.



Draw a shape and shade $\frac{3}{4}$ of the shape. **6.** What fraction is located at point A on the number line?



7. What is the unit fraction below?



9. What fraction best represents point C on the number line below?



8. Dean wants to share his pizza with 5 friends. What fraction of the pizza should each person get?



10. What point represents $\frac{3}{6}$ on the number line below?



A. Point AB. Point BC. Point CD. Point D

Name

Comparing Fractions with the Same Denominator

- **1.** Lay out a one-whole bar.
- **2.** Lay out the bars for the first fraction under the one-whole.

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



1

3. Lay out the fraction that is being compared. Compare the two fractions and determine which is longer. Fill in your comparison.

 $\frac{2}{3}$ (>) $\frac{1}{3}$

	1	
$\frac{1}{3}$	$\frac{1}{3}$	
$\frac{1}{3}$		-

MODEL DRAWING

Compare the fractions below.



- 1. Draw a large rectangle and split it in half horizontally.
- **2.** Label the two rectangles with the compared fractions.
- **3.** Split the rectangles into the number of equal pieces needed to represent the fraction.
- **4.** Shade in the amount determined by the numerator.
- **5.** Compare the fractions and determine which is greater.

	<u> </u> 2	<u>1</u> 2		
<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	
4	4	4	4	

Comparing Fractions with Different Denominators

- **1.** Lay out a one-whole bar.
 - $\frac{1}{3}$ > $\frac{2}{8}$

1	

2. Lay out the bars for the first fraction under the one-whole.



3. Lay out the fraction that is being compared. Compare the two fractions and determine which is longer. Fill in your comparison.





MODEL DRAWING

Compare the fractions below.

$$\frac{2}{4}$$
 \checkmark $\frac{4}{6}$

<u>1</u> 4		<u>1</u> 4	<u>1</u> 4			$\frac{1}{4}$
<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	1	<u> </u>	<u>1</u>
6	6	6	6	(5	6

- 1. Draw a large rectangle and split it in half horizontally.
- **2.** Label the two rectangles with the compared fractions.
- **3.** Split the rectangles into the number of equal pieces needed to represent the fraction.
- **4.** Shade in the amount determined by the numerator.
- **5.** Compare the fractions and determine which is greater.

Comparing Fractions Quiz

Compare the fractions below. Write in a <, >, or = to complete the comparison.

- **1.** $\frac{2}{4} < \frac{4}{6}$
- **3.** $\frac{1}{3} < \frac{3}{6}$
- 5. Molly has $\frac{1}{3}$ of her pizza remaining and Kendall has $\frac{1}{4}$ of her pizza left. Who has more pizza left? Draw a model and solve.



7. Which of the following statements is true? Model draw and solve.



9. Shelby said that $\frac{1}{4}$ is greater than $\frac{1}{3}$ because 4 is greater than 3. Is she correct? Explain why or why not?

Explain: Sample answer: No. $\frac{1}{3}$ is greater than $\frac{1}{4}$ because there are

3 pieces in the whole.



- **4.** $\frac{7}{8}$ > $\frac{3}{4}$
- 6. Nick and Abigail both painted these fences. Who painted less of their fence? Use <, >, or = to write a comparison using the fraction amount painted.



Nick's Fence > Abigail's Fence Answer: _____

8. Mountain Peak High School has 4 girls and 4 boys on the track team. The volleyball team has 6 girls and 2 boys. Which correctly compares the fraction of girls on the two teams?

A.
$$\frac{4}{4} > \frac{2}{6}$$
C. $\frac{4}{8} > \frac{2}{6}$ **B.** $\frac{2}{4} < \frac{6}{8}$ **D.** $\frac{4}{8} < \frac{6}{8}$

10. Monica worked on homework for $\frac{2}{4}$ of an hour. Then she played outside for $\frac{1}{2}$ of an hour. Did Monica spend more, less, or an equal amount of time doing homework as playing outside? Model, solve, and explain your answer.

Sample answer: Monica spent

equal time doing homework and

Explain: playing outside when you

look at the model.

Equivalent Fractions

Equivalentfractions are fractions that name theequivalentpart of afraction

Find an equivalent fraction to $\frac{2}{8}$.

1. Start with a one-whole bar and lay two one-eighth bars below it (lined up at the edge).





- **2.** Try moving fraction pieces to find what is equal.
- **3.** Count the number of $\frac{1}{4}$ bars that equal $\frac{2}{8}$.



Write the equivalent fraction.

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

SOLVE THE PROBLEM

Johnny has $\frac{2}{3}$ of his pizza left over. Find an equivalent fraction to the amount of pizza that Johnny has remaining. Use fraction tiles to model and solve (draw the pictorial representation of the fraction tiles on your paper).

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

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Equivalent Fractions on a Number Line

Bella wants to find a fraction that is equivalent to $\frac{1}{3}$. Draw a number line to represent $\frac{1}{3}$ and another to model an equivalent fraction.

FIRST

Draw a number line to represent the first fraction. Make sure to label 0 and 1, as well as all parts of the whole.

SECOND

Draw a second number line to find an equivalent fraction. The distances from 0 to 1 on both number lines must be equal. The number lines should be the same length and lined up evenly.



THIRD

Determine the equivalent fraction by finding a point on the second number line that is at the same part of the whole.

ANSWER

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

JUSTIFY

How do you know you are correct?

Sample answer: Both $\frac{1}{3}$ and $\frac{2}{6}$ are in the same spot

on the number line.

Answers will vary.

Equivalent Fractions Quiz

Find the equivalent fractions below. Draw a model to solve.

1.
$$\frac{2}{4} = \frac{2}{12}$$

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

Which of the following fraction pairs 5. are equivalent?

A.
$$\frac{1}{3}, \frac{4}{6}$$

B. $\frac{2}{4}, \frac{5}{8}$
C. $\frac{3}{6}, \frac{1}{2}$
D. $\frac{7}{8}, \frac{3}{4}$

Which of the models below is 7. equivalent to $\frac{6}{8}$?



Reed says that $\frac{4}{6}$ and $\frac{2}{3}$ are equivalent fractions. Is she correct? Explain why 9. or why not. Use the number lines below to help.



- **2.** $\frac{2}{8} = \frac{3}{4}$ **4.** $\frac{2}{3} = \frac{4}{6}$
- **6.** Which fraction is not equivalent to $\frac{1}{2}$? **A.** $\frac{2}{4}$ **B.** $\frac{1}{3}$ **C.** $\frac{3}{6}$ **D.** $\frac{4}{8}$
- The number lines below show two 8. fractions. Are the two number lines equivalent?



- A. Yes, because both number lines represent the same whole.
- **B.** No, because there are two different wholes.
- C. Yes, because each number line correctly represents the fractions
- D. No, because the fractions are not at the same point on the number lines.
- **10.** How can you determine if two number lines are equivalent?

Explain: Sample answer: You can place one directly below the other.

Explain: Sample answer: Yes, both numbers are in the same place on the number line and are equivalent fractions. 34 Grade 3 • Unit 5 • Lesson 15 Quiz

Assessment

Read each problem below and solve.

1. What fraction is represented by the point on the number line?



2. If 3 dogs have to share 2 bones, what fraction of the bones will each dog receive?

Answer: ______

3. Matt ran $\frac{2}{3}$ of a trail. Becca ran $\frac{3}{4}$ of another trail that was the same length. Who ran a greater distance? Draw a model to compare and solve.



4. What fraction of the figure is shaded?



5. Jacob said that $\frac{3}{4}$ is between 0 and $\frac{2}{4}$ on the number line. Do you agree? Why or why not? Draw a number line and justify your answer.



6. Robert has 3 blue crayons, 2 green crayons, and 3 brown crayons. What fraction of Robert's crayons are blue?



7. What is the unit fraction of the figure below?



B. Daniel made a pizza and cut it into eighths. He ate 4 slices. Derek also made a pizza that was the same size, cut it into fourths, and ate 3 slices. Write a fraction to represent how much pie Derek ate.

Answer: ______

- **9.** Which of the following statements is true? Draw a model and solve.
- **10.** Which two number lines below show equivalent fractions?





below. If a paperclip is the the same length as the distance from 0 to the point, how long is the paperclip?

11. Examine the point on the number line



12. Model a fraction equivalent to $\frac{1}{2}$. Then write the answer.

 $\frac{1}{2} =$ Answers will vary,
sample answer: $\frac{4}{8}$

- **13.** Write the sum of unit fractions in $\frac{6}{8}$.
- **14.** Compare the fractions modeled. Use <, >, or = to write a comparison.





	$\frac{4}{4}$
Answer:	8 6
-	

15. Draw a number line to model an equivalent fraction to the one below.







16. Justin said that he had finished painting four-sixths of his wall. Draw a model to show how much Justin has completed.



- **17.** Trey worked on homework for $\frac{1}{3}$ of an hour. Then he played outside for $\frac{1}{2}$ of an hour. Did Trey spend more, less, or an equal amount of time doing homework and playing outside? Model, solve, and explain your answer.
- **18.** DeeDee is building a fence in front of her vegetable garden. What part of the fence did DeeDee finish building?



Justify: Sample answer: Trey spent more time playing outside than doing

homework.

Model:

19. Find the equivalent fraction below.

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

20. Which of the following statements is true? Draw a model and solve.

A.
$$\frac{4}{8} > \frac{5}{6}$$

B. $\frac{2}{6} = \frac{2}{3}$
C. $\frac{5}{8} > \frac{3}{6}$
D. $\frac{1}{2} < \frac{1}{3}$

Examine the fraction model and answer the questions.

Write the unit fraction that represents each part of the whole. $\frac{1}{8}$

What fraction of the whole is shaded? $\frac{\frac{4}{8}}{8}$



What fraction names all the parts in the whole? $\frac{8}{8}$

Grade 3 • Unit 5 • Lesson 2 © Reagan Tunstall Examine the Model Cards, Set 1

Model the fractions below by drawing the whole and dividing the model into equal pieces.



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Find the unit fraction of each whole model and the fraction for the number of pieces shaded.



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Draw a picture to describe each set below.

Six triangles, $\frac{5}{6}$ of the triangles are shaded.



Two rectangles, one-half is not shaded.



Grade 3 • Unit 5 • Lesson 3 © Reagan Tunstall 8 circles, two-eighths of the circles are shaded.

3 triangles, two-thirds are not shaded.



Draw a Picture Cards, Set 1

Write the unit fraction of each model below.



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Draw a model to represent each unit fraction below.

one-fourth



one-eighth



one-half



one-sixth



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<u>3</u> 6

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Number Line Fraction Cards, Set 1



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<u>5</u> 8

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Number Line Fraction Cards, Set 1



 $\frac{1}{3}$

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four equal parts; $\frac{3}{4}$



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Number Line Fraction Cards, Set 1

eight equal parts; $\frac{2}{8}$



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Number Line Fraction Cards, Set 1

six equal parts; $\frac{4}{6}$



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Number Line Fraction Cards, Set 1

three equal parts; $\frac{2}{3}$



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Number Line Fraction Cards, Set 1

two equal parts; $\frac{1}{2}$



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Number Line Fraction Cards, Set 1
Divide the number line into the given number of parts and shade to the given point.

twelve equal parts; $\frac{5}{12}$



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Number Line Fraction Cards, Set 1

Examine the point on the number line below. If a nail is the same length as the distance from 0 to the point, how long is the nail? Write your answer below.



 $\frac{3}{5}$ inches

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Tim folded a piece of paper into 3 equal parts. If Tim wants to label each of the three parts, what is the unit fraction?

 $\frac{1}{3}$

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Draw the following set below.

6 triangles,
$$\frac{4}{6}$$
 are shaded.



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Danielle has 4 blue ribbons, 1 green ribbon, and 3 white ribbons. What fraction of Danielle's ribbons are white?

A.
$$\frac{1}{3}$$

B. $\frac{4}{7}$
C. $\frac{3}{8}$
D. $\frac{4}{8}$

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Marty made the fraction model below. Which fraction of the model is not white?



A.
$$\frac{5}{8}$$

B. $\frac{4}{8}$

C. $\frac{3}{8}$

D. $\frac{3}{5}$

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Draw a model to represent $\frac{3}{4}$.



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Comparing Fractions with Different Denominators Cards

Answer and solve the problems below.

1. Jessica said that $\frac{1}{12}$ is greater than $\frac{1}{8}$ because 12 is greater than 8. Is she correct? Explain why or why not. Sample answer: No. $\frac{1}{12}$ of a whole are smaller than $\frac{1}{8}$ of a whole.

3. Margaret has painted $\frac{3}{4}$ of her fence. Tim has the same length of fence to paint and has painted $\frac{1}{2}$. Who has painted more of their fence? Draw a model and solve.

Sample answer: Margaret painted more fence because $\frac{3}{4}$ is larger than $\frac{1}{2}$. Answer: _____

2. Derek has $\frac{1}{6}$ of his pizza remaining and Garret has $\frac{3}{8}$ of his pizza left. Who has more pizza left? Draw a model and solve.

Answer: Garret

4. Which of the following statements is not true? Draw a model and solve.

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

B. $\frac{2}{8} = \frac{1}{4}$
C. $\frac{2}{6} < \frac{6}{8}$
D. $\frac{4}{8} < \frac{1}{3}$

Model Equivalent Fractions

Use fraction bars to model each fraction and then find an equivalent fraction. Draw the fraction bar models. Answers will vary.



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Draw Equivalent Fractions

Use fraction bars to model each fraction and then find an equivalent fraction. Draw the fraction bar models.

1.	_4	1		2.	1	3
	8	2			4	12
3.	_2 _	4		4.	4	8
	3	6			4	8
5.	1 =	2		6.	6	3
	2	4			8	4
7.	_6	4		8.	2	_ 1
	12	8			6	3
9.	_1 _	4		10.	1	2
	3	12			4	8

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Which two number lines below show equivalent fractions?



Ronnie drew the fraction number lines below. Ronnie thinks that $\frac{1}{3}$ is equal to $\frac{1}{2}$ because they are at the same point. What was Ronnie's mistake? Examine the number lines below and determine the mistake.



Justify: Sample answer: The number lines are not equally representing one whole.

Grade 3 • Unit 5 • Lesson 14 © Reagan Tunstall Equivalent Fractions Number Line Cards, Set 1

Alexis drew the two number lines below. Find the equivalent fraction pair on the number lines.



Draw a pair of number lines to model two equivalent fractions.

Answers will vary.



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Draw a model to represent.



Grade 3 • Unit 5 • Lesson 16 © Reagan Tunstall **Decomposing Fraction Cards**

Draw a number line to model "jumping" by unit fractions. Write each fraction as a sum of unit fractions.



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Decomposing Fraction Number Line Cards

Eight people will share 4 dollars.



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Fractions and Division Cards, Set 1

Six people will share 3 hot dogs.





Grade 3 • Unit 5 • Lesson 17

Fractions and Division Cards, Set 1

Four friends share 2 apples.



Grade 3 • Unit 5 • Lesson 17

Fractions and Division Cards, Set 1

Two siblings share 1 cookie.



Grade 3 • Unit 5 • Lesson 17

Fractions and Division Cards, Set 1

Eight friends share 3 pizzas.



Grade 3 • Unit 5 • Lesson 17

Fractions and Division Cards, Set 1

Three dogs share 2 biscuits.



Grade 3 • Unit 5 • Lesson 17

Fractions and Division Cards, Set 1

Six friends share 3 ears of corn.



Grade 3 • Unit 5 • Lesson 17

Fractions and Division Cards, Set 1

Four friends share a slice of cheese.



Grade 3 • Unit 5 • Lesson 17

Fractions and Division Cards, Set 1

Three people share 3 soccer balls.



Grade 3 • Unit 5 • Lesson 17

Fractions and Division Cards, Set 1
Read the scenario, draw a model, and solve.

Eight friends share 6 cupcakes.



Grade 3 • Unit 5 • Lesson 17

Fractions and Division Cards, Set 1

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Megan is building a fence in front of her flowers. What part of the fence did Megan finish building?



Mark walked $\frac{3}{4}$ of a walking trail. Katy walked $\frac{5}{6}$ of another trail. Who walked a greater distance?



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Compare the fractions modeled. Use <, =, or > to write a comparison.



Which statement is true? (Hint: draw models)



Are the two points on the number lines equivalent? Why or why not?



What fraction of the figure is shaded?



Lindsey is stringing beads to make a bracelet. How much of the bracelet has she strung together?



Which statement is true? (Hint: draw models)



Which picture shows equivalent fractions? (Hint: draw models)



What fraction is represented by the point on the number line?





James ate $\frac{2}{4}$ of his candy bar. Which picture shows a fraction equivalent to $\frac{2}{4}$?



Whitney made a pie and cut it into fourths. She ate 2 slices. Damian cut his pie into sixths and ate 2 slices. Write a fraction to represent how much pie each person ate.

> Whitney ate $\frac{2}{4}$ of her pie. Damian ate $\frac{2}{6}$ of his pie.