

# Oregon Teacher Toolbox

## Resource Sampler



Grade

5

# Engaging Resources to Drive

*i-Ready Classroom Mathematics, Oregon Edition* includes a wealth of resources to meet the needs of all learners. The Oregon Teacher Toolbox resources are accessible through the Teacher Digital Experience via [i-ReadyConnect.com](https://i-ReadyConnect.com).

## Easily Access All Grades K–8 Resources on the Oregon Teacher Toolbox:

- Oregon Enhancement Activities <sup>E/S</sup>
- Activity Sheets <sup>E/S</sup>
- Assessments (*Lesson Quizzes, Practice Tests, and Unit Assessments—Forms A and B*) <sup>E/S</sup>
- Cumulative Practice <sup>E/S</sup>
- Develop Session Videos
- Digital Math Tools
- Discourse Cards <sup>E/S</sup>
- Graphic Organizers <sup>E/S</sup>
- Games (*Unit Level K–8 and Grade Level K–2*) <sup>E/S</sup>
- Enrichment Activities <sup>E/S</sup>
- Family Letters <sup>E/S</sup>
- Fluency and Skills Practice <sup>E/S</sup>
- Implementation Support

<sup>E/S</sup> = Available in English and Spanish  
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**Teacher Toolbox**

Program: i-Ready Classroom - OR | Subject: Math | Grade: K 1 2 3 4 5 6 7 8

Program Implementation: Classroom Resources | Classroom Resources (Spanish) | Assessment Practice

	Whole Class Instruction		Small Group Differentiation		
	Teach		Assess	Prepare	Reteach
	Instruction & Practice	Interactive Tutorials	Lesson Quizzes & Unit Assessments	Prerequisite Lessons	Tools for Instruction
Unit 2: Decimals and Fractions: Place Value, Addition, and Subtraction					
Lesson 9: Compare and Round Decimals 5.NBT.A.1, 5.NBT.A.3, 5.NBT.A.4					
One-Day Activity: Compare Decimals and Fractions 5.NBT.A.3					
Lesson 10: Add Decimals 5.NBT.B.7					

**Sessions**

- Lesson Overview
- Family Letter
- Session 1: Explore
- Session 2: Develop
- Session 3: Refine








**Session 1: Explore**

Lesson Overview: Adding Decimals

Lesson 10: Add Decimals



# Student Growth

- Interactive Tutorials 
- Literacy Connection Activities 
- Math Center Activities *(On Level, Below Level, and Above Level)* 
- Student Worktext PDFs 
- PowerPoint® Slides *(Editable)* 
- Prerequisite Lessons 
- Professional Learning Videos
- Teacher's Guide PDFs
- Tools for Instruction 
- Unit Flow & Progression Videos *(Closed Captioned in English and Spanish)*

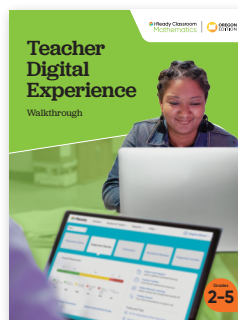
## Table of Contents

This sampler includes some of the lesson- and unit-level resources available on Oregon Teacher Toolbox for **Unit 3: More Decimals and Fractions: Multiplication and Division, Lesson 18: Fractions as Division.**

Enhancement  
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Resources  
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Unit-Level  
Resources  
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**Check out the Teacher Digital Experience Walkthrough to see more digital resources!**

Explore all Grades K–8 resources in your demo account. Review the Teacher Digital Experience Walkthrough to see how.

# Oregon Enhancement Activities

Oregon Enhancement Activities provide additional notes and activities to ensure all the Oregon Mathematics Standards are addressed. **Following are the two types of Enhancement Activities.**

**EDUCATOR NOTE**

## Two-Digit Divisors

**Dear Educator,**

In this lesson students will divide up to four-digit dividends by two-digit divisors to get whole-number quotients using a variety of strategies.

According to OR 5.NBT.B.6, students are not required to work with divisors greater than 25.

One way to modify the content to fully meet this standard is to change divisors to two-digit numbers less than or equal to 25 in selected problems. Alternatively, omit problems where the divisor is greater than 25.

**Oregon Mathematics Standard**

**5.NBT.B.6** Use a variety of representations and strategies to find whole-number quotients of whole numbers with up to four-digit dividends and two-digit divisors.

**PROVIDED EXAMPLE**

**Lesson 5, page 84, problem 7**


Estimate the quotient  $342 \div 38$ . Show your work.

**SUGGESTED MODIFICATION**

Estimate the quotient  $342 \div 19$ . Show your work.

GRADE 5 • Two-Digit Divisors

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**EDUCATOR NOTE**

## Hierarchy

**Dear Educator,**

In Lessons 28 and 29 students will use their understanding of geometrical properties of two-dimensional figures to show hierarchical relationships between categories of figures. Students first focus on the hierarchical relationships between categories of figures contained within another category and then classify polygons in hierarchies with categories that partially overlap.

According to OR 5.GM.B.3, students are not expected to make hierarchies. Additionally, kites and octagons should be included throughout instruction.

To ensure students gain experience working with kites in hierarchies, have students complete the Challenge Activity in Lesson 29 of the Teacher Guide (page 605).

One way to modify the content to fully meet this standard is to add octagons in selected problems. Also, provide the necessary hierarchies in selected problems to ensure that students are not required to make them.

**Oregon Mathematics Standard**

**5.GM.B.3** Classify two-dimensional figures within a hierarchy based on their geometrical properties, and explain the relationship across and within different categories of these figures.

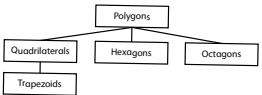
**PROVIDED EXAMPLE**

**Lesson 29, page 603, problem 1**

Draw a Venn diagram or a tree diagram to show the relationships among quadrilaterals, polygons, trapezoids, and hexagons. Then write a statement about the relationship between quadrilaterals and trapezoids.

**SUGGESTED MODIFICATION**

The tree diagram shows the relationships among quadrilaterals, polygons, trapezoids, hexagons, and octagons. Write a statement about the relationship between quadrilaterals and trapezoids.



```
graph TD; Polygons --> Quadrilaterals; Polygons --> Hexagons; Polygons --> Octagons; Quadrilaterals --> Trapezoids;
```

GRADE 5 • Hierarchy

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## Educator Notes

- Describe how the content in the *i-Ready Classroom Mathematics, Oregon Edition* instructional program varies from the expectations of the Oregon Mathematics Standards.
- Also include an example of how the content might be modified in order to better address the Oregon Mathematics Standards.

### ***Educator Notes are provided when:***

- Oregon Mathematics Standards require different content limits or vocabulary terms OR
- A clear modification can tailor the *i-Ready Classroom Mathematics, Oregon Edition* instructional program to address Oregon expectations



# One-Day Activities

- Step-by-step, teacher-led activities with a focus on hands-on tasks for students
- Activity sheets provided within the activity as needed to support student work

**One-Day Activities are provided when:**

- There is a less comprehensive Oregon Mathematics Standard that is not addressed by the *i-Ready Classroom Mathematics, Oregon Edition* instructional program OR
- The scope of a Oregon Mathematics Standard goes beyond the instruction provided

## ONE-DAY ACTIVITY

### Compare Decimals and Fractions

In Grade 4, students learned to read and write decimals and compare decimals to tenths and hundredths using visual models. They also learned to compare fractions by using benchmark fractions or common numerators or denominators. In Lesson 9, students built on their knowledge of decimals to compare and round decimals through thousandths. In this activity, students will compare decimals and fractions, including equivalent fractions and decimals, on both single and double number lines.

#### Materials

- copies of **Recording Sheets**, 1 per pair (pages 6–8)
- copy of **Decimals and Fractions** (page 9)
- copy of **Fraction and Decimal Stations** (page 10)
- copies of **Fraction Cards**, 1 per pair (page 11)
- copies of **Fraction Cards**, 1 per pair (page 12)
- copies of **Check for Understanding** (page 13)

#### 1 Introduce comparing decimals and fractions.

- Project **Decimals and Fractions** to the class. Cover everything except the first problem statement. Read the problem aloud.
- Ask: *Can you compare a decimal and a fraction? Why or why not? (Yes, because they are both numbers.)* Uncover the double number line on the sheet. Say: *A double number line can be used to compare decimals and fractions.*
- Say: *First, let's label the double number line. Ask: What two whole numbers does 0.4 fall between? (0 and 1) What two whole numbers does  $\frac{6}{10}$  fall between? (0 and 1)* Guide students to answer what whole numbers each number falls between by asking questions such as:
  - Is 0.4 greater than 0? (yes) Is 0.4 greater than 1? (no)
  - Is  $\frac{6}{10}$  greater than 0? (yes) Is  $\frac{6}{10}$  greater than 1? (no)
- Label the first tick mark on each number line 0 and label the last tick mark on each number line 1. Say: *The number lines have the same scale. Let's put fractions on the top number line and decimals on the bottom number line. Let's start with decimals. Point to the first unlabeled tick mark on the bottom number line. Ask: What should this tick mark be labeled? (0.1)* Guide students to say the correct tick mark label by asking questions such as:
  - How many tick marks are there between 0 and 1? (9)
  - What do these tick marks represent? (tenths)
  - How do you write 1 tenth as a decimal? (0.1)

GRADE 5 • Compare Decimals and Fractions

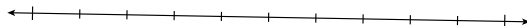
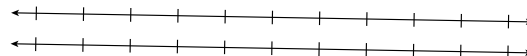
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## ONE-DAY ACTIVITY

Name: \_\_\_\_\_

### Recording Sheet 1

India's pencil is 6.005 inches long. Gary's pencil is  $6\frac{1}{200}$  inches long. Whose pencil is longer?



6.005   $6\frac{1}{200}$

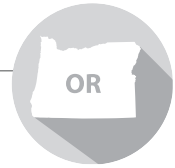
Teacher pages and student recording sheet shown here. The full activity and additional **Enhancement Activities** can be accessed through the Oregon Teacher Toolbox.

#### Teacher Toolbox

Program	Subject	Grade	K	1	2	3	4	5	6	7	8
i-Ready Classroom - OR	Math										
Program Implementation											
Classroom Resources			Classroom Resources (Spanish)				Assessment Practice				
Whole Class Instruction			Small Group Differentiation								
Teach	Assess		Prepare		Reteach		Reinforce		Extend		
Instruction & Practice	Interactive Tutorials	Lesson Quizzes & Unit Assessments	Prerequisite Lessons		Tools for Instruction		Math Center Activities		Enrichment Activities		
Unit 2: Decimals and Fractions: Place Value, Addition, and Subtraction											
Lesson 9: Compare and Round Decimals											
5.NBT.A.1, 5.NBT.A.3, 5.NBT.A.4											
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## EDUCATOR NOTE



# Hierarchy

## Dear Educator,

In Lessons 28 and 29 students will use their understanding of geometrical properties of two-dimensional figures to show hierarchical relationships between categories of figures. Students first focus on the hierarchical relationships between categories of figures contained within another category and then classify polygons in hierarchies with categories that partially overlap.

According to OR 5.GM.B.3, students are not expected to make hierarchies. Additionally, kites and octagons should be included throughout instruction.

To ensure students gain experience working with kites in hierarchies, have students complete the Challenge Activity in Lesson 29 of the Teacher Guide (page 605).

One way to modify the content to fully meet this standard is to add octagons in selected problems. Also, provide the necessary hierarchies in selected problems to ensure that students are not required to make them.

## Oregon Mathematics Standard

**5.GM.B.3** Classify two-dimensional figures within a hierarchy based on their geometrical properties, and explain the relationship across and within different categories of these figures.

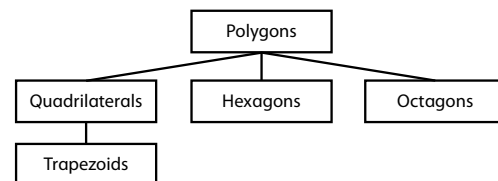
### PROVIDED EXAMPLE

#### Lesson 29, page 603, problem 1

Draw a Venn diagram or a tree diagram to show the relationships among quadrilaterals, polygons, trapezoids, and hexagons. Then write a statement about the relationship between quadrilaterals and trapezoids.

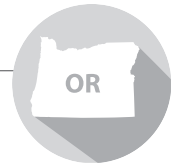
### SUGGESTED MODIFICATION

The tree diagram shows the relationships among quadrilaterals, polygons, trapezoids, hexagons, and octagons. Write a statement about the relationship between quadrilaterals and trapezoids.





## ONE-DAY ACTIVITY



# Compare Decimals and Fractions

In Grade 4, students learned to read and write decimals and compare decimals to tenths and hundredths using visual models. They also learned to compare fractions by using benchmark fractions or common numerators or denominators. In Lesson 9, students built on their knowledge of decimals to compare and round decimals through thousandths. In this activity, students will compare decimals and fractions, including equivalent fractions and decimals, on both single and double number lines.

## Oregon Mathematics Standard

**5.NBT.A.3** Read, write, and compare decimals to thousandths.

### Materials

- copies of **Recording Sheets**, 1 per pair (pages 6–8)
- copy of **Decimals and Fractions** (page 9)
- copy of **Fraction and Decimal Stations** (page 10)
- copies of **Decimal Cards**, 1 per pair (page 11)
- copies of **Fraction Cards**, 1 per pair (page 12)
- copies of **Check for Understanding** (page 13)

### 1 Introduce comparing decimals and fractions.

- Project **Decimals and Fractions** to the class. Cover everything except the first problem statement. Read the problem aloud.
- Ask: *Can you compare a decimal and a fraction? Why or why not?* (**Yes, because they are both numbers.**) Uncover the double number line on the sheet. Say: *A double number line can be used to compare decimals and fractions.*
- Say: *First, let's label the double number line.* Ask: *What two whole numbers does 0.4 fall between?* (**0 and 1**) *What two whole numbers does  $\frac{6}{10}$  fall between?* (**0 and 1**) Guide students to answer what whole numbers each number falls between by asking questions such as:
  - *Is 0.4 greater than 0?* (**yes**) *Is 0.4 greater than 1?* (**no**)
  - *Is  $\frac{6}{10}$  greater than 0?* (**yes**) *Is  $\frac{6}{10}$  greater than 1?* (**no**)
- Label the first tick mark on each number line 0 and label the last tick mark on each number line 1. Say: *The number lines have the same scale. Let's put fractions on the top number line and decimals on the bottom number line. Let's start with decimals.* Point to the first unlabeled tick mark on the bottom number line. Ask: *What should this tick mark be labeled?* (**0.1**) Guide students to say the correct tick mark label by asking questions such as:
  - *How many tick marks are there between 0 and 1?* (**9**)
  - *What do these tick marks represent?* (**tenths**)
  - *How do you write 1 tenth as a decimal?* (**0.1**)





## ONE-DAY ACTIVITY

- e. When students understand that the tick marks represent tenths, label the tick marks on the bottom number line  $0.1, 0.2, 0.3, 0.4, 0.5, 0.6, 0.7, 0.8$ , and  $0.9$ .
- f. Say: *Now, let's write fractions on the top number line.* Point to the first unlabeled tick mark on the top number line. Ask: *What fraction is equivalent to 1 tenth?* ( $\frac{1}{10}$ ) Label the tick mark  $\frac{1}{10}$ . Point to the second unlabeled tick mark on the top number line. Ask: *What fraction is equivalent to 2 tenths?* ( $\frac{2}{10}$ ) Label the tick mark  $\frac{2}{10}$ . Continue to label the remaining tick marks  $\frac{3}{10}, \frac{4}{10}, \frac{5}{10}, \frac{6}{10}, \frac{7}{10}, \frac{8}{10}$ , and  $\frac{9}{10}$ .
- g. Invite a volunteer to draw a point to represent Jean's almonds on the double number line. Have the volunteer label the point *Jean*. Guide the volunteer to draw the correct point by asking questions such as:
  - Which number line shows decimals? (**The bottom number line.**)
  - How much do Jean's almonds weigh? (**0.4 pound**)
  - Where is 0.4 on the bottom number line? (**The fourth tick mark after 0.**)
- h. Invite another volunteer to draw a point to represent Sam's almonds on the double number line. Have the volunteer label the point *Sam*. Guide the volunteer to draw the correct point by asking questions such as:
  - Which number line shows fractions? (**The top number line.**)
  - How much do Sam's almonds weigh? ( $\frac{6}{10}$  **pound**)
  - Where is  $\frac{6}{10}$  on the top number line? (**The sixth tick mark after 0.**)
- i. Ask: *Who has more almonds?* (**Sam**) How do you know? (**The point for Sam's almonds is farther to the right on the number line than the point for Jean's almonds.**) Point to the circle on the sheet where a comparison symbol goes. Ask: *What symbol goes here?* (**less than**)
- j. Cover everything except the second problem statement and its number line on the sheet. Read the problem aloud. Say: *A single number line can also be used to compare decimals and fractions.*
- k. Say: *First, let's label the number line.* Ask: *What two whole numbers does 4.35 fall between?* (**4 and 5**) *What two tenths does 4.35 fall between?* (**4.3 and 4.4**) *How can you write 4.3 and 4.4 in hundredths?* (**Write a zero after the tenths place: 4.30 and 4.40.**) Guide students to answer the questions by asking questions such as:
  - Is 4.35 greater than 4? (**yes**) Is 4.35 greater than 5? (**no**)
  - Is 4.35 greater than 4.30? (**yes**) Is 4.35 greater than 4.40? (**no**)



## ONE-DAY ACTIVITY

- l. Label the first tick mark on the number line 4.30 and label the last tick mark on the number line 4.40. Ask: *How do you write 4.30 as a fraction?* ( $4\frac{30}{100}$ ) Write  $4\frac{30}{100}$  under 4.30 on the number line. Ask: *How do you write 4.40 as a fraction?* ( $4\frac{40}{100}$ ) Write  $4\frac{40}{100}$  under 4.40 on the number line. Ask: *Does  $4\frac{38}{100}$  fall between  $4\frac{30}{100}$  and  $4\frac{40}{100}$  on the number line?* (yes) Say: *Both points can be plotted on this number line.*
- m. Say: *The number line shows equivalent fractions and decimals.* Point to the first unlabeled tick mark on the number line. Ask: *What should this tick mark be labeled in decimals?* (4.31) Guide students to say the correct label by asking questions such as:
  - *How many tick marks are there between 4.30 and 4.40?* (9)
  - *What do these tick marks represent?* (hundredths)
  - *How do you write 4 and 31 hundredths as a decimal?* (4.31)
- n. When students understand that the tick marks represent hundredths, label the tick marks on the number line 4.31, 4.32, 4.33, 4.34, 4.35, 4.36, 4.37, 4.38, and 4.39.
- o. Say: *Now let's write equivalent fractions for each tick mark.* Point to the tick mark labeled 4.31. Ask: *What fraction is equivalent to 4 and 31 hundredths?* ( $4\frac{31}{100}$ ) Label the tick mark  $4\frac{31}{100}$ . Point to the next tick mark. Ask: *What fraction is equivalent to 4 and 32 hundredths?* ( $4\frac{32}{100}$ ) Label the tick mark  $4\frac{32}{100}$ . Continue to label the remaining tick marks  $4\frac{33}{100}$ ,  $4\frac{34}{100}$ ,  $4\frac{35}{100}$ ,  $4\frac{36}{100}$ ,  $4\frac{37}{100}$ ,  $4\frac{38}{100}$ , and  $4\frac{39}{100}$ .
- p. Invite a volunteer to draw a point to represent Sofia's modeling clay on the number line. Have the volunteer label the point *Sofia*. Guide the volunteer to draw the correct point by asking questions such as:
  - *How much modeling clay did Sofia make?* ( $4\frac{38}{100}$  pounds)
  - *Where is  $4\frac{38}{100}$  on the number line?* (The eighth tick mark after  $4\frac{30}{100}$ .)
- q. Invite another volunteer to draw a point to represent Ari's modeling clay on the number line. Have the volunteer label the point *Ari*. Guide the volunteer to draw the correct point by asking questions such as:
  - *How much modeling clay did Ari make?* (4.35 pounds)
  - *Where is 4.35 on the number line?* (The fifth tick mark after 4.30.)
- r. Ask: *Who made more modeling clay?* (Sofia) *How do you know?* (The point for Sofia's modeling clay is farther to the right on the number line than the point for Ari's modeling clay.) Point to the circle on the sheet where a comparison symbol goes. Ask: *What symbol goes here?* (greater than)



## ONE-DAY ACTIVITY

- s. Provide pairs of students with a copy of **Recording Sheet 1**. Instruct students to use the number line or double number line to help them solve the problem. Guide students to answer the problem by asking questions such as:
- Which two hundredths is 6.005 between? (6.00 and 6.01) How can you write these two hundredths as thousandths? (6.000 and 6.010)
  - How can you write the two thousandths as fractions? ( $6\frac{0}{1000}$  and  $6\frac{10}{1000}$ )
  - What fraction with a denominator of 1,000 is equivalent to  $6\frac{1}{200}$ ? ( $6\frac{5}{1000}$ )
  - Where is 6.005 on the number line? (The fifth tick mark after 6.000.)
  - Where is  $6\frac{5}{1000}$  on the number line? (The fifth tick mark after  $6\frac{0}{1000}$ .)
- t. Ask: Whose pencil is longer? (Both pencils are the same length.) How do you know? (6.005 and  $6\frac{1}{200}$  are at the same location on the number line.)

## 2 Practice comparing decimals and fractions.

- a. Place the **Fraction and Decimal Stations** around the room at different locations. Provide pairs of students with **Recording Sheet 2**.
- b. Instruct students to go to each station, in any order. At each station, students will compare decimal and fraction values to solve the problem.
- c. Have students draw a single or double number line to show their work and record their solutions to the problems on the Recording Sheet. Guide students to solve the problems by asking questions such as:
- What numbers are mentioned in the problem?
  - Are the numbers given to the tenths, hundredths, or thousandths?
  - What fraction with a denominator of 10, 100, or 1,000 is equivalent to the fraction in the mixed number? The decimal number?
  - How can you model the problem?
  - How can you label the tick marks on your number line?
  - After modeling the problem, how can you tell which value is greater?
- d. Have students share and compare their work on the Recording Sheet. (Check that students draw a number line or double number line to model the problem and write the correct comparison for each station.)





## ONE-DAY ACTIVITY

### 3 Play a game to practice comparing decimals and fractions.

- Tell students that they will be playing a game with a partner involving comparing decimals and fractions. Provide one student in each pair with a set of **Decimal Cards** and the other student with a set of **Fraction Cards**. Have students shuffle their set of cards and place the cards in a pile facedown.
- Have students draw a card from their pile and place it face up. Instruct students to compare the numbers on their cards. The student who has the greater number gets to keep both cards. If students have equivalent numbers, each student must draw another card and compare the new numbers. Whoever has the greater number takes all four cards.
- Have students continue until they have gone through all the cards in their piles. The student who has the most cards at the end of the game wins!
- If time allows, have students sort the cards back into decks of decimal and fraction cards. Instruct the students who used fraction cards to use decimal cards this time, and vice versa, and play again. This time the partner with the lesser number gets to keep the cards.

### 4 Check for understanding.

Provide students with **Check for Understanding**. Have students draw a single or double number line to show how the two values in the problem compare. (*Aba's crayon is longer.*)

Observe and monitor students' reasoning and guide or redirect them as necessary.

Use the table below to pinpoint where extra support may be needed.

If you observe...	the student may...	Then try...
the student says Huang's crayon is longer than Aba's crayon,	have incorrectly converted $8\frac{7}{20}$ to a fraction with a denominator of 1,000.	asking the student: <i>What do you multiply 20 by to get 100?</i> [5] <i>What do you multiply 100 by to get 1,000?</i> [10] <i>What can you multiply <math>\frac{7}{20}</math> by to get a denominator of 1,000?</i> [ $\frac{50}{50}$ ]
the student says the crayons are the same length,	have only compared the values to the hundredths rather than to the thousandths.	asking the student whether the decimal number is given to tenths, hundredths, or thousandths. Then ask what denominator of the fraction should be to compare the values.

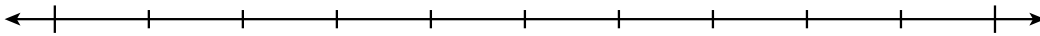
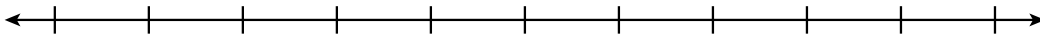
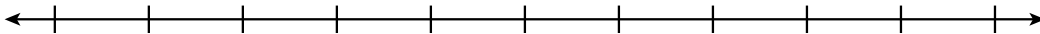


## ONE-DAY ACTIVITY

Name: \_\_\_\_\_

**Recording Sheet 1**

India's pencil is 6.005 inches long. Gary's pencil is  $6\frac{1}{200}$  inches long. Whose pencil is longer?



$$6.005 \quad \bigcirc \quad 6\frac{1}{200}$$



## ONE-DAY ACTIVITY

Name: \_\_\_\_\_

## Recording Sheet 2

Station 1:

$$9\frac{1}{4} \bigcirc 9.254$$

Station 2:

$$2.15 \bigcirc 2\frac{3}{20}$$





## ONE-DAY ACTIVITY

Name: \_\_\_\_\_

Recording Sheet 2 *continued***Station 3:**

$$10.2 \bigcirc 10\frac{2}{5}$$

**Station 4:**

$$1.346 \bigcirc 1\frac{7}{20}$$

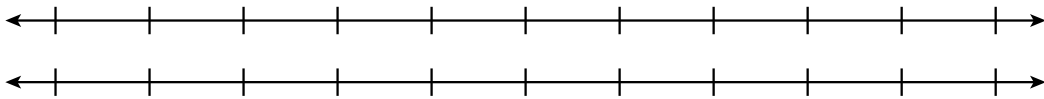


## ONE-DAY ACTIVITY

Name: \_\_\_\_\_

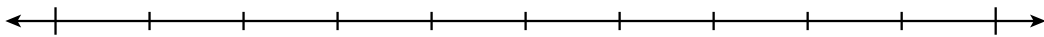
## Decimals and Fractions

1. Jean and Sam each buy a bag of mixed nuts. Jean has 0.4 pound of almonds in his bag and Sam has  $\frac{6}{10}$  pound of almonds in his bag. Who has more almonds?



$$0.4 \quad \bigcirc \quad \frac{6}{10}$$

2. Sofia and Ari are making modeling clay. Sofia made  $4\frac{38}{100}$  pounds and Ari made 4.35 pounds. Who made more modeling clay?



$$4\frac{38}{100} \quad \bigcirc \quad 4.35$$



## ONE-DAY ACTIVITY

Name: \_\_\_\_\_

## Fraction and Decimal Stations

**Station 1:**

Package A has a mass of  $9\frac{1}{4}$  grams. Package B has a mass of 9.254 grams. Which package has more mass?

**Station 2:**

Alex's textbook is 2.15 inches thick. Mya's textbook is  $2\frac{3}{20}$  inches thick. Which textbook is thicker?

**Station 3:**

Andrew jumps 10.2 feet high during a pole vault. Deshawn jumps  $10\frac{2}{5}$  feet high during a pole vault. Who jumps higher?

**Station 4:**

Mike travels 1.346 miles to school. Joanna travels  $1\frac{7}{20}$  miles to school. Who travels farther to get to school?





## ONE-DAY ACTIVITY

Name: \_\_\_\_\_

## Decimal Cards



0.2

0.25

0.24

0.245

0.205

0.3

0.22

0.225



## ONE-DAY ACTIVITY

Name: \_\_\_\_\_

## Fraction Cards



$$\frac{2}{10}$$

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

$$\frac{11}{50}$$

$$\frac{1}{5}$$

$$\frac{3}{10}$$

$$\frac{6}{25}$$

$$\frac{5}{20}$$

$$\frac{41}{200}$$



## ONE-DAY ACTIVITY

Name: \_\_\_\_\_

## Check for Understanding

Huang's crayon is  $8\frac{7}{20}$  centimeters long. Aba's crayon is 8.355 centimeters long.  
Whose crayon is longer? Show your work.



.....

“I love the rigor of the program,  
and I love having access to all  
grade levels of the [Teacher]  
Toolbox. It allows me to  
differentiate instruction within  
each of my math groups.”

—**Mathematics Educator**

.....



# Lesson-Level Resources

## Lesson 18: Fractions as Division

### Additional Practice

Fluency and Skills Practice . . . . . [22](#)

### Differentiation

Reteach: Tools for Instruction . . . . . [23](#)

Reinforce: Differentiated Math Center Activities

On Level. . . . . [25](#)

Above Level . . . . . [27](#)

Below Level . . . . . [29](#)

Extend: Enrichment Activity . . . . . [31](#)

### Assessment

Lesson Quiz . . . . . [33](#)



## LESSON 18

## Fractions as Division

Solve each problem.

- 1 Roger has 4 gallons of orange juice. He puts the same amount of juice into each of 5 pitchers. How many gallons of orange juice are in each pitcher?
- 2 Marta has 8 cubic feet of potting soil and 3 flower pots. She puts the same amount of soil in each pot. How many cubic feet of soil does she put in each flower pot if she uses all of the soil?
- 3 Greg makes 27 ounces of potato salad to serve to 10 guests at a picnic. If each serving is the same size, how much potato salad does each guest receive?
- 4 Chandra spends 15 minutes doing 4 math problems. She spends the same amount of time on each problem. How many minutes does she spend on each problem?
- 5 Taylor uses 5 yards of gold ribbon to decorate 8 costumes for the school play. She uses the same amount of ribbon for each costume. How many yards of ribbon does she use for each costume?
- 6 DeShawn uses 7 yards of wire fencing to make a play area for his puppy. He cuts the fencing into 6 pieces of equal length. How long is each piece of fencing?
- 7 What is a division word problem that can be represented by  $\frac{4}{3}$ ?

# Tools for Instruction

## Interpreting Fractions as Division

**Objective** Interpret a fraction as division of the numerator by the denominator.

Students have been working with parts of a whole for a few years and should be able to identify, name, and model fractions. They should also be able to use models to write equivalent fractions. What students may not know is that a fraction is a way to show division, i.e., a numerator divided by a denominator. In this activity, students will draw pictures and number lines to discover that a fraction can be interpreted as a way to show division as part of a whole. This activity will help students broaden their understanding of fractions and enable them to make new connections between fractions and division.

### Two Ways to Teach

#### Drawing to Model Fractions as Division 10–15 minutes

Have the student draw a picture to show 3 pizzas. The pizzas will be shared equally by 4 boys. Ask: *Will each boy eat more or less than 1 pizza? How do you know?* (Each boy will eat less than 1 pizza because there are more boys than there are pizzas.) Have the student divide each pizza in the drawing into fourths so that the pizzas can be evenly shared among the 4 boys. The student can shade or label pieces one by one to show how they can be shared equally among the 4 boys. Ask what fraction of a pizza each boy will receive. ( $\frac{3}{4}$ ) Guide the student to write an equation to model the problem. ( $3 \div 4 = \frac{3}{4}$ ) Next, have the student draw a picture to show that 5 pizzas are shared equally by 6 girls. Ask: *Will each girl eat more or less than 1 pizza? How do you know?* (Each girl will eat less than 1 pizza because the dividend is less than the divisor.) Ask the student to tell what fraction of a pizza each girl will receive. ( $\frac{5}{6}$ ) Have the student write an equation to model the problem. ( $5 \div 6 = \frac{5}{6}$ ) Repeat with similar problems as needed. Write the equations on the board so that the student can begin to see the pattern that emerges. Guide the student to see that the dividend in the division expression becomes the numerator of the fraction and that the divisor in the division expression becomes the fraction's denominator.

**Support English Learners** Present the student with a visual representation that connects the numerator of a fraction to the dividend of a division expression and the denominator of the fraction to the divisor of the expression.

#### Use a Number Line to Model a Fraction as Division 10–15 minutes

Write " $1 \div 4$ " on the board. Have the student draw a number line with one end labeled 0 and the other labeled 1. Say: *This problem asks us to divide one by four. So, we will divide this number line into four equal parts.* Guide the student to draw in marks and labels for fourths so that the line shows 0,  $\frac{1}{4}$ ,  $\frac{2}{4}$ ,  $\frac{3}{4}$ , 1. Discuss that in the expression  $1 \div 4$ , only one part of the whole is being counted. Guide the student to shade along the number line from 0 to  $\frac{1}{4}$  to show the division of 1 by 4. Then show the student how to write an equation to model the problem. ( $1 \div 4 = \frac{1}{4}$ ) Write " $3 \div 4$ " on the board. Discuss that three wholes are being divided by 4. Have the student draw another number line to 3 and divide each whole into fourths. Remind the student that they need to count  $\frac{1}{4}$  from each whole. Have the student write an equation to show the problem. ( $3 \div 4 = \frac{3}{4}$ ) Repeat with other examples. Write the equations on the board so that the student can begin to see the pattern that emerges. (The number of equal parts is the denominator. The number of wholes is the numerator.)

## Tools for Instruction

## Check for Understanding

Present the student with the following problem: *5 pies are shared equally by 8 students. What fraction of a pie will each student receive?* Have the student draw a model or use a number line to represent the division. Then have the student write an equation to solve the problem. ( $5 \div 8 = \frac{5}{8}$ )

For the student who struggles, use the table below to help pinpoint where extra help may be needed.

If you observe...	the student may...	Then try...
the student divides 8 by 5 instead of dividing 5 by 8,	not have drawn an accurate model.	having the student talk through the parts of the problem as they are creating a representation to help solve the problem.



CENTER ACTIVITY ●●

Name: \_\_\_\_\_

## LESSON 18

On Level is  
shown here.

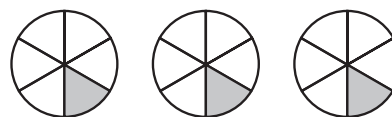
# Fractions As Quotients

## What You Need

- Recording Sheet

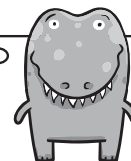
## What You Do

1. Take turns. Choose a division model from the **Recording Sheet**.
2. Tell your partner a division equation that represents the model.
3. Your partner tells you a multiplication equation that represents the model.
4. Say how the two equations are related.
5. If your partner agrees, you each write your equation on the **Recording Sheet** in the space below the model.

*The division model*

*shows  $3 \div 6 = \frac{3}{6}$ , because there are 3 wholes each divided into 6 parts.*

*I can check the quotient by writing a related multiplication equation:*  
 $\frac{1}{6} \times 3 = \frac{3}{6}$ .



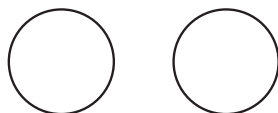
## Check Understanding

Sketch a model to find the quotient of  $3 \div 8$ . Write a division equation and a multiplication equation to represent the model.



## Go Further

Partition and shade the model to show that the quotient  $\frac{2}{5}$  represents the division of the numerator by the denominator. Have your partner write a multiplication equation and division equation for the model.





## CENTER ACTIVITY ●●

## LESSON 18

Partner A: \_\_\_\_\_

Partner B: \_\_\_\_\_

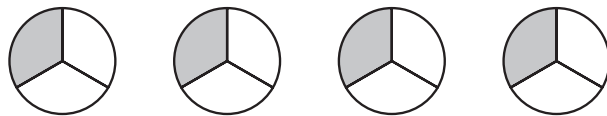
## Fractions As Quotients Recording Sheet

A



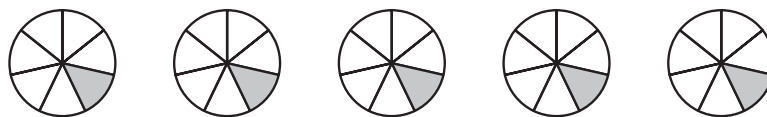
$$\underline{\hspace{2cm}} \div \underline{\hspace{2cm}} = \underline{\hspace{2cm}} \quad \underline{\hspace{2cm}} \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

B



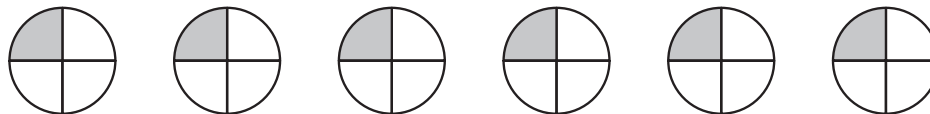
$$\underline{\hspace{2cm}} \div \underline{\hspace{2cm}} = \underline{\hspace{2cm}} \quad \underline{\hspace{2cm}} \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

C



$$\underline{\hspace{2cm}} \div \underline{\hspace{2cm}} = \underline{\hspace{2cm}} \quad \underline{\hspace{2cm}} \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

D



$$\underline{\hspace{2cm}} \div \underline{\hspace{2cm}} = \underline{\hspace{2cm}} \quad \underline{\hspace{2cm}} \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$





## CENTER ACTIVITY ●●●

Name: \_\_\_\_\_

## LESSON 18

Above Level is  
shown here.

# Fractions As Quotients

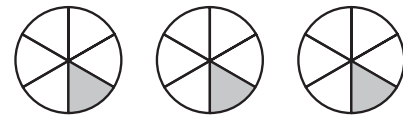
## What You Need

- Recording Sheet

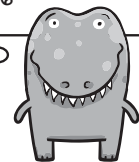
## What You Do

1. Take turns. Choose a division model from the **Recording Sheet**.
2. Tell your partner a division equation that represents the model.
3. Your partner tells you a multiplication equation that represents the model.
4. Say how the two equations are related.
5. If your partner agrees, you each write your equation on the **Recording Sheet** in the space below the model.

The division model



shows  $3 \div 6 = \frac{3}{6}$ , because there are 3 wholes each divided into 6 parts. I can check the quotient by writing a related multiplication equation:  $\frac{1}{6} \times 3 = \frac{3}{6}$ .



## Check Understanding

Kareem has 8 cups of trail mix divided into 5 bags. If the trail mix is shared equally, how much is in each bag? Use a model to find the answer. Then explain why your answer makes sense.



## Go Further

Draw a model to represent a fraction less than 1 as a quotient. Write a division equation and a multiplication equation for your model. Exchange papers with your partner to check.



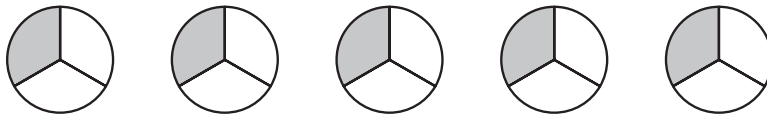
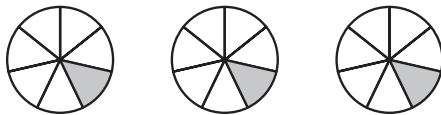
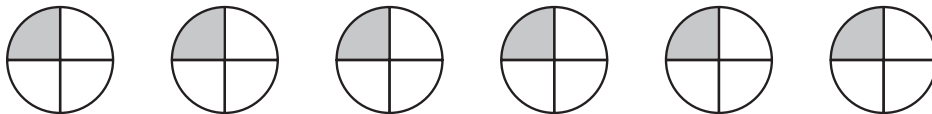
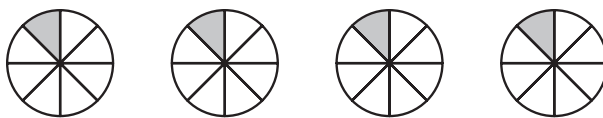
CENTER ACTIVITY ●●●

LESSON 18

Partner A: \_\_\_\_\_

Partner B: \_\_\_\_\_

## Fractions As Quotients Recording Sheet

**A** $\underline{\hspace{1cm}} \div \underline{\hspace{1cm}} = \underline{\hspace{1cm}} \qquad \underline{\hspace{1cm}} \times \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$ **B** $\underline{\hspace{1cm}} \div \underline{\hspace{1cm}} = \underline{\hspace{1cm}} \qquad \underline{\hspace{1cm}} \times \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$ **C** $\underline{\hspace{1cm}} \div \underline{\hspace{1cm}} = \underline{\hspace{1cm}} \qquad \underline{\hspace{1cm}} \times \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$ **D** $\underline{\hspace{1cm}} \div \underline{\hspace{1cm}} = \underline{\hspace{1cm}} \qquad \underline{\hspace{1cm}} \times \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$



## CENTER ACTIVITY ●

Name: \_\_\_\_\_

## LESSON 18

Below Level is  
shown here.

# Fractions As Quotients

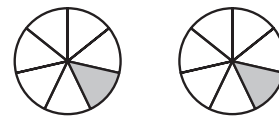
## What You Need

- Recording Sheet

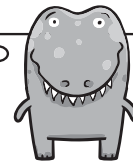
## What You Do

1. Take turns. Choose a division model from the **Recording Sheet**. Use numbers from the number bank to write the answers.
2. Choose your numbers carefully. Some numbers will be used more than once.
3. Tell your partner a division equation that represents the model.
4. Your partner tells you a multiplication equation that represents the model.
5. Say how the two equations are related.
6. If your partner agrees, you each write your equation on the **Recording Sheet** in the space below the model.

If my model looks like this,



then my division equation would be  $2 \div 7 = \frac{2}{7}$ , and my multiplication equation would be  $\frac{1}{7} \times 2 = \frac{2}{7}$ .



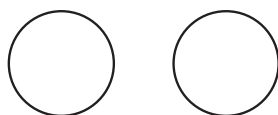
## Check Understanding

Sketch a model to find the quotient of  $3 \div 4$ . Write a division equation and a multiplication equation to represent the model.



## Go Further

Partition and shade the model to show  $2 \div 3$ . Have your partner write a division equation and a multiplication equation for the model.





## CENTER ACTIVITY ●

## LESSON 18

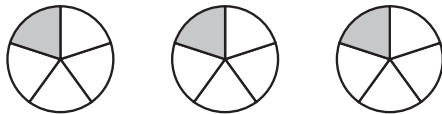
Partner A: \_\_\_\_\_

Partner B: \_\_\_\_\_

## Fractions As Quotients Recording Sheet

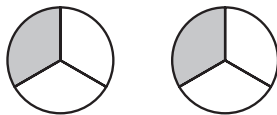
Number Bank												
2	3	4	5	$\frac{3}{2}$	$\frac{1}{3}$	$\frac{2}{3}$	$\frac{5}{3}$	$\frac{5}{4}$	$\frac{1}{4}$	$\frac{1}{5}$	$\frac{3}{5}$	$\frac{4}{5}$

A



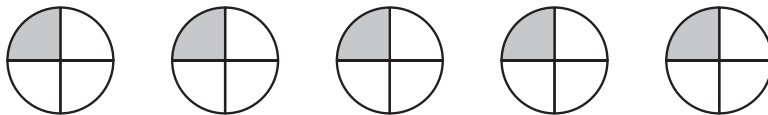
\_\_\_\_\_ ÷ \_\_\_\_\_ = \_\_\_\_\_      \_\_\_\_\_ × \_\_\_\_\_ = \_\_\_\_\_

B



\_\_\_\_\_ ÷ \_\_\_\_\_ = \_\_\_\_\_      \_\_\_\_\_ × \_\_\_\_\_ = \_\_\_\_\_

C



\_\_\_\_\_ ÷ \_\_\_\_\_ = \_\_\_\_\_      \_\_\_\_\_ × \_\_\_\_\_ = \_\_\_\_\_



## ENRICHMENT ACTIVITY

Name: \_\_\_\_\_

## LESSON 18

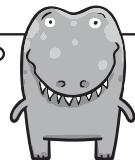
## Pizza Party

### Your Challenge

You and some of your friends order small pizzas and eat equal shares.

- No one eats exactly  $\frac{1}{2}$  of a pizza, 1 whole pizza, or  $1\frac{1}{2}$  pizzas.
  - Two full pizzas are too much for anyone to eat.
  - After everyone has an equal share, there is  $\frac{1}{2}$  of a pizza left.
  - Small pizzas have 6, 8, or 12 slices.
1. How many friends and pizzas could there have been, and how much pizza could each friend have eaten? Draw a picture on the **Recording Sheet** to show how the friends could have shared the pizza and write an equation to represent the situation.
  2. Is there another way those friends could have shared the pizza? Show how you know on the **Recording Sheet**.

What if all the pizzas do not have the same number of slices?





## ENRICHMENT ACTIVITY

Name: \_\_\_\_\_

## LESSON 18

## Pizza Party

1.

---

2.





## LESSON 18 • QUIZ

Name: \_\_\_\_\_

**Digital Comprehension**  
Checks are also available.

**Solve the problems.**

- 1** Sara uses 7 cups of apples to make 4 batches of applesauce.  
Which expressions show the number of cups of apples in one batch?

Decide if each expression is correct.

Choose *Yes* or *No* for each expression.

	Yes	No
$7 \div 4$	(A)	(B)
$\frac{1}{7} + \frac{1}{7} + \frac{1}{7} + \frac{1}{7}$	(C)	(D)
$\frac{4}{7}$	(E)	(F)
$7 \times \frac{1}{4}$	(G)	(H)
$1\frac{3}{4}$	(I)	(J)

- 2** Which of the following situations can be represented by  $\frac{14}{5}$ ?  
Choose all the correct answers.

- (A) Renee has 14 feet of ribbon that she cuts into 5 pieces of equal length.
- (B) Michael has 14 packs of trading cards with 5 cards in each pack.
- (C) Logan opens 5 bags of trail mix and pours them equally into 14 bowls.
- (D) Patrick takes 5 oranges from a bag containing 14 oranges.
- (E) Tim walks 14 blocks to the library and then walks another 5 blocks home.
- (F) Arianna cuts a piece of fish that weighs 14 ounces into 5 equal servings.



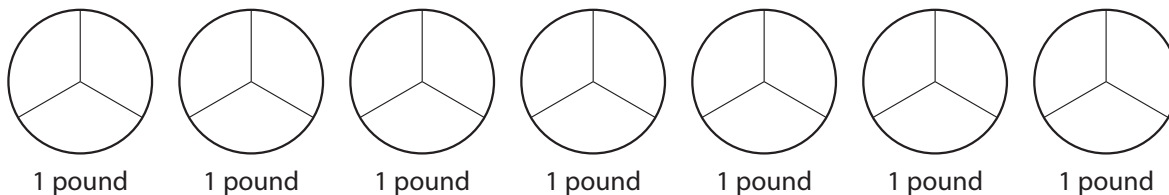
## LESSON 18 • QUIZ

Name: \_\_\_\_\_

- 3 Ava pours 3 gallons of paint equally into 8 cans. How many gallons of paint are there in each can? Show your work.

**Solution** \_\_\_\_\_

- 4 Micah has several pounds of sliced peaches. He shares them equally among three containers. The model represents this division.

**Part A**

Which situation does the model represent?

- Ⓐ Micah divides 7 pounds of peaches into 3 equal groups.
- Ⓑ Micah divides 3 pounds of peaches into 7 equal groups.
- Ⓒ Micah divides 1 pound of peaches into groups of  $\frac{1}{3}$  pound.
- Ⓓ Micah divides 7 pounds of peaches into groups of  $\frac{1}{7}$  pound.

**Part B**

The weight in pounds of the peaches in each container is between which two whole numbers? Show your work.



“The assessments are  
highly rigorous and  
just what we need to  
challenge our students!”

—**Mathematics Educator**

# Unit-Level Resources

## Unit 3: More Decimals and Fractions: Multiplication and Division

Unit Game . . . . .	<a href="#">37</a>
Literacy Connection . . . . .	<a href="#">39</a>
Mid-Unit Assessment (Form A) . . . . .	<a href="#">44</a>
Unit Assessment (Form A) . . . . .	<a href="#">49</a>



GAME

UNIT 3

Name: \_\_\_\_\_

## Fraction and Decimal Products

**What you need:** *Fraction and Decimal Products*

Recording Sheet, 1 number cube (1–6)



### Directions

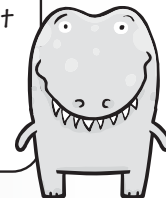
- Both players roll the number cube 4 times and record the four digits at the top of the Recording Sheet. Players use these same digits for Rounds 1 through 4.
- In Round 1, the player with the *greatest product* wins the round. Use the digits to make two fractions and multiply them. Record the product on the Recording Sheet.
- In Round 2, the player with the *least product* wins the round. Make two fractions and multiply them. Record the product.
- In Round 3, the player who makes the *greatest product* wins. Make two tenths decimals and multiply them. Record the product.
- In Round 4, the player who makes the *least product* wins. Again, make two tenths decimals and multiply.
- In Round 5, the players decide together whether to multiply fractions or decimals and whether to try for the greatest or least result. Players circle their choices on the Recording Sheet. After deciding, players both roll 4 new numbers to use in the final round.

**Fraction and Decimal Products Recording Sheet**

**Pam**  
Player A Name  
Digits: 2 4 6 1  
Greatest Product  
1.  $\frac{4}{2} \times \frac{6}{1} = 12$   
Least Product

**Scott**  
Player B Name  
Digits: 5 3 1 4  
Greatest Product  
1.  $\frac{5}{1} \times \frac{4}{3} = 6\frac{2}{3}$   
Least Product

The greater the fractions, the greater the sum. But is that true when multiplying two fractions?





GAME

UNIT 3

Name: \_\_\_\_\_

## Fraction and Decimal Products Recording Sheet

---

 Player A Name

 Digits:    

Greatest Product

1. 
$$\frac{\square}{\square} \times \frac{\square}{\square} = \square$$

Least Product

2. 
$$\frac{\square}{\square} \times \frac{\square}{\square} = \square$$

Greatest Product

3. 
$$\square.\square \times \square.\square$$

Least Product

4. 
$$\square.\square \times \square.\square$$

Greatest Product/Least Product

5. 
$$\frac{\square}{\square} \times \frac{\square}{\square} = \square$$

$$\square.\square \times \square.\square$$

---

 Player B Name

 Digits:    

Greatest Product

1. 
$$\frac{\square}{\square} \times \frac{\square}{\square} = \square$$

Least Product

2. 
$$\frac{\square}{\square} \times \frac{\square}{\square} = \square$$

Greatest Product

3. 
$$\square.\square \times \square.\square$$

Least Product

4. 
$$\square.\square \times \square.\square$$

Greatest Product/Least Product

5. 
$$\frac{\square}{\square} \times \frac{\square}{\square} = \square$$

$$\square.\square \times \square.\square$$



# ANCIENT Saharan Trade Routes

by Joris Maddrin

1 The Sahara is a vast desert in northern Africa. It stretches from the Atlantic Ocean in the west to the Red Sea in the east. Its size and harsh conditions make travel hazardous. Nevertheless, trade thrived here from the 700s to the 1500s. It continues to this day.

2 Long ago, Berber merchants established a network of trade routes across the Sahara. These routes linked markets in North Africa, the Middle East, and Europe with markets in West Africa. The merchants regularly crossed the Sahara to African settlements on the fringes of the desert. In those settlements, they traded salt, horses, cloth, and later, books for gold, metals, spices, and other items from farther south. Berber and African merchants made profits, so trade increased. As a result, the African settlements grew to become important centers of trade. And as trade increased, so did the wealth and power of the West African rulers.

3 To Berber merchants, the dangerous journey across the Sahara was worth the risk. For safety, merchants traveled together in large groups known as caravans. Using camels to transport their goods, caravans walked about 200 miles a week. Even at that pace, however, the trip took more than three months.

4 The merchants' use of camels made it possible for them to cross the Sahara. These hardworking animals could carry heavy loads with ease over scorching, shifting sands. During long journeys, they had the ability to conserve water. Camels were called "ships of the desert" because they hauled trade goods across the desert, just as ships carried cargo across the sea.





## Literacy Connection: Social Studies

### “Ancient Saharan Trade Routes”: Multiply a Decimal by a Whole Number

Use the table to solve the problems. Show your work. Then answer the question by completing the sentence.

After reading about the Ancient Saharan Trade Routes, the fifth graders at an elementary school decide to start a crafts and goods store. The store is a place where students can sell items they make. The table below shows the items for sale and prices for those items at the “Fifth Grade Crafts and Goods Store.”

Item	Price per Item
Cookie	\$0.60
Pencil Box	\$2.55
Cupcake	\$0.75
Hat	\$5.33
Book Cover	\$0.99

- 1** Sergio wants to buy 5 cookies. How much money does he need to buy the cookies?

Sergio needs \_\_\_\_\_ to buy the cookies.

**Literacy Connection: Social Studies** *continued*

- 2** If Mr. Jenkins buys 8 book covers, what is the total amount he will pay for them?

Mr. Jenkins will pay \_\_\_\_\_ for the book covers.

- 3** If Mrs. Nash buys 7 pencil boxes, what is the total amount she will pay for them?

Mrs. Nash will pay \_\_\_\_\_ for the pencil boxes.

**Literacy Connection: Social Studies** *continued*

- 4** Gabby has \$5.00. She wants to buy 4 cookies and 4 cupcakes. Does Gabby have enough money? Explain your answer.

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“I highly recommend the use of Teacher Toolbox beyond what words can even convey. Most importantly, the growth I see in students using the [Teacher] Toolbox resources is unmatched. And that’s what matters!”

—**Mathematics Educator**

.....



## UNIT 3 • MID-UNIT ASSESSMENT 1

Name: \_\_\_\_\_

## FORM A

Solve the problems.

- 1** Mitchell buys a rectangular rug that is 3.8 meters long and 0.9 meter wide. How many square meters does the rug cover? Record your answer on the grid. Then fill in the bubbles.

0	0	0	0	0	0
1	1	1	1	1	1
2	2	2	2	2	2
3	3	3	3	3	3
4	4	4	4	4	4
5	5	5	5	5	5
6	6	6	6	6	6
7	7	7	7	7	7
8	8	8	8	8	8
9	9	9	9	9	9

Form A is shown here. Digital Comprehension Checks and Form B are also available.

- 2** Ma Lee swims for 4 weeks. Each week she swims for 6.3 hours. Ma Lee wants to know how many hours she swims in 4 weeks.

Ma Lee draws the area model below to find the product of 4 and 6.3.

	6	0.3
4	$4 \times 6 = ?$	$4 \times 0.3 = ?$

How many hours does Ma Lee swim in 4 weeks? Write your answer in the blank.

\_\_\_\_\_ hours

- 3** A plant grows 1.8 centimeters each month. There are 12 months in a year. How many centimeters does the plant grow in 1 year? Show your work.

**Solution** \_\_\_\_\_



## UNIT 3 • MID-UNIT ASSESSMENT 1

Name: \_\_\_\_\_

**FORM A** continued

- 4** Kalani finds  $0.05 \times 0.8$  on a calculator. The calculator shows a product of 0.04. Kalani says the calculator must be broken because multiplying tenths by hundredths gives a product in the thousandths. Is Kalani's calculator broken? Explain.

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- 5** What is the product of 0.7 and 3.4?

- Ⓐ 0.238  
Ⓑ 2.38  
Ⓒ 23.8  
Ⓓ 238



## UNIT 3 • MID-UNIT ASSESSMENT 1

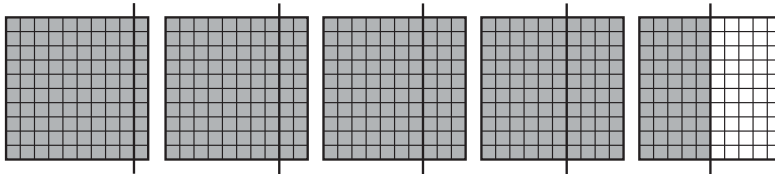
Name: \_\_\_\_\_

**FORM A** continued

- 6** Alyssa is helping to set up drinks and snacks for a luncheon.

**Part A**

Alyssa has 4.5 liters of orange juice to pour into pitchers. She pours 0.9 liter of orange juice into each pitcher. Alyssa draws the model below to show how many pitchers she fills. Is Alyssa's model correct? Explain.




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**Part B**

Alyssa combines a 40.2-gram bag of peanuts and a 51.3-gram bag of almonds. She puts an equal amount of the combined peanut and almond mix into each of 3 snack bags. How many grams of mix does Alyssa put into each snack bag? Show your work.

**Solution** \_\_\_\_\_





## UNIT 3 • MID-UNIT ASSESSMENT 1

Name: \_\_\_\_\_

**FORM A** continued

- 7** A customer buys 6 yards of fabric. Each yard of the fabric costs \$1.75. What is the total cost of the fabric? Show your work.

**Solution** \_\_\_\_\_

- 8** Erynn has 3.28 gigabytes of data available on her phone. She wants to stream 30-minute videos. Each video uses 0.82 gigabyte of data. How many videos can Erynn stream? Show your work.

**Solution** \_\_\_\_\_



## UNIT 3 • MID-UNIT ASSESSMENT 1

Name: \_\_\_\_\_

**FORM A** continued

- 9** Samantha has \$3.45. She wants to buy pencils at the school store. Each pencil costs \$0.23. Which division equation and related multiplication equation could Samantha use to find how many pencils she can buy?

- (A)  $0.23 \div ? = 3.45$       (B)  $0.23 \div 3.45 = ?$   
 $0.23 \times ? = 3.45$        $3.45 \times ? = 0.23$   
 (C)  $3.45 \div ? = 0.23$       (D)  $3.45 \div 0.23 = ?$   
 $0.23 \times 3.45 = ?$        $0.23 \times ? = 3.45$

- 10** DeShawn has 3.5 bottles of water. Each full bottle holds 8.25 fluid ounces. DeShawn wants to know how many fluid ounces of water he has in all.

**Part A**

DeShawn draws this area model to find the partial products. Complete the area model.

	8	0.2	0.05
3	24		
0.5			0.025

**Part B**

How many fluid ounces of water does DeShawn have in all?  
Show your work.

**Solution** \_\_\_\_\_



## UNIT 3 • UNIT ASSESSMENT

Name: \_\_\_\_\_

## FORM A

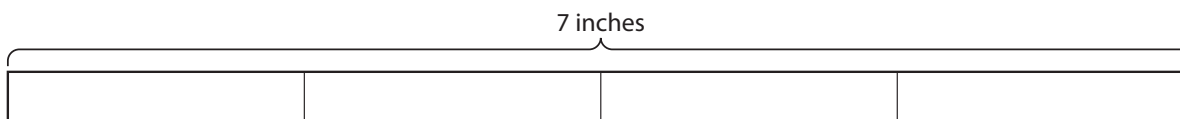
**Solve the problems.**

- 1** A hiking trail is  $2\frac{3}{5}$  miles long. Lucy walks  $\frac{1}{2}$  of the trail before stopping for a water break. How many miles does Lucy walk before stopping? Show your work.

Form A is shown here. Digital Comprehension Checks and Form B are also available.

**Solution** \_\_\_\_\_

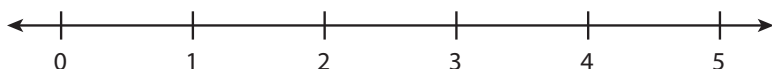
- 2** A bar that measures 7 inches long is divided into 4 equal parts. What is the length of one of those parts?



Use fractions or mixed numbers to find the length of one part. Complete the equation. Write your answer in the blanks.

\_\_\_\_\_  $\times$  7 inches = \_\_\_\_\_ inch(es)

- 3** Mateo has 5 pints of blueberries. He divides the blueberries into  $\frac{1}{4}$ -pint servings. How many servings does he make? Show your work.



**Solution** \_\_\_\_\_



## UNIT 3 • UNIT ASSESSMENT

Name: \_\_\_\_\_

**FORM A** continued

- 4** Without multiplying, decide if each expression is less than, greater than, or equal to  $\frac{3}{5}$ .

Choose *Less than  $\frac{3}{5}$* , *Greater than  $\frac{3}{5}$* , or *Equal to  $\frac{3}{5}$*  for each expression.

	Less than $\frac{3}{5}$	Greater than $\frac{3}{5}$	Equal to $\frac{3}{5}$
$\frac{5}{5} \times \frac{3}{5}$	(A)	(B)	(C)
$\frac{7}{4} \times \frac{3}{5}$	(D)	(E)	(F)
$\frac{4}{7} \times \frac{3}{5}$	(G)	(H)	(I)
$\frac{8}{8} \times \frac{3}{5}$	(J)	(K)	(L)
$\frac{9}{10} \times \frac{3}{5}$	(M)	(N)	(O)

- 5** Amanda buys 2.5 pounds of nuts. The nuts cost \$4.36 per pound. Amanda wants to know the total cost of the nuts.

**Part A**

Amanda draws this area model to find the partial products. Complete the area model.

	4	0.3	0.06
2	8	_____	_____
0.5	_____	_____	0.03

**Part B**

How much do the nuts cost in all? Show your work.

**Solution** \_\_\_\_\_



## UNIT 3 • UNIT ASSESSMENT

Name: \_\_\_\_\_

## FORM A continued

- 6** A teacher has a stack of booklets that is 3.6 centimeters tall. The thickness of each booklet is 0.72 centimeter. How many booklets are in the stack? Show your work.

**Solution** \_\_\_\_\_

- 7** Willow has  $\frac{3}{4}$  yard of ribbon. She uses  $\frac{2}{3}$  of the ribbon to make a bow. How many yards of ribbon does Willow use to make a bow? Show your work.

**Solution** \_\_\_\_\_

- 8** What is the product of 6 and 9.7?

- Ⓐ 582
- Ⓑ 58.2
- Ⓒ 5.82
- Ⓓ 0.582



## UNIT 3 • UNIT ASSESSMENT

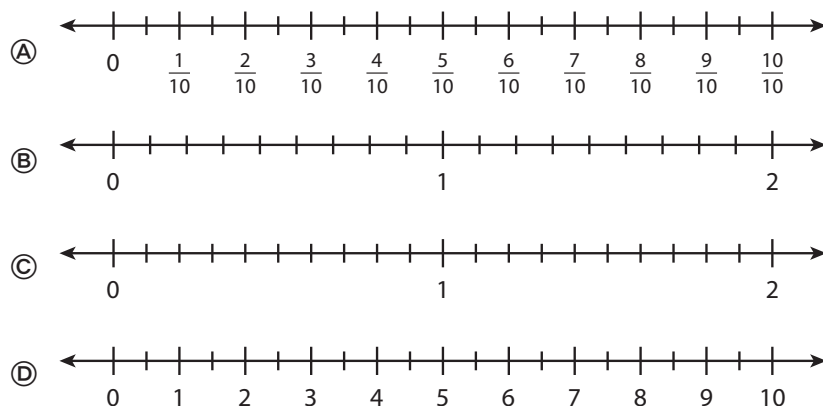
Name: \_\_\_\_\_

**FORM A** continued

- 9** Russell wants to ride 2 miles on his bike. Each lap around his block is  $\frac{1}{10}$  mile. Russell wants to figure out how many laps he needs to ride.

**Part A**

Which model could Russell use to find how many laps he needs to ride?

**Part B**

How many laps around the block does Russell need to ride his bike? Write a division equation and a multiplication equation to represent the problem.

Russell needs to ride his bike \_\_\_\_\_ laps.

- 10** Nika is filling pots with soil to plant some flowers. She estimates that she needs  $\frac{1}{5}$  bag of soil for each pot. How many pots can she fill with 3 bags of soil? Show your work.

**Solution** \_\_\_\_\_



## UNIT 3 • UNIT ASSESSMENT

Name: \_\_\_\_\_

**FORM A** continued

- 11** A rectangular cork board is  $\frac{2}{3}$  yard wide and  $\frac{10}{9}$  yards long.

Complete the equation to find the area of the cork board in square yards.  
Write your answers in the blanks.

\_\_\_\_\_  $\times$  \_\_\_\_\_ = \_\_\_\_\_ square yard(s)

- 12** Anne has a  $\frac{1}{4}$ -cup scoop that she uses to pour sunflower seeds into bags.  
She uses one full scoop for each bag.

**Part A**

Anne makes this table to show how many bags she can fill from the given amounts of sunflower seeds. Complete Anne's table.  
Write your answers in the blanks.

Cups of Sunflower Seeds	Number of Bags
1	_____
2	_____
4	_____

**Part B**

Anne has 7 cups of sunflower seeds. How many bags can she fill?  
Show your work.

**Solution** \_\_\_\_\_



## UNIT 3 • UNIT ASSESSMENT

Name: \_\_\_\_\_

## FORM A continued

- 13** Amos says that the product  $n \times \frac{3}{4}$  is greater than  $\frac{3}{4}$  because a product is always greater than its factors. Which of the following values for  $n$  show that Amos is incorrect? Choose all the correct answers.

Ⓐ  $\frac{9}{8}$

Ⓑ  $\frac{5}{5}$

Ⓒ  $\frac{3}{8}$

Ⓓ  $\frac{3}{2}$

Ⓔ 4

- 14** A chef shares 10 cups of pecans equally among 8 containers. Which expressions show the number of cups of pecans in one container?

Decide if each expression is correct.

Choose Yes or No for each expression.

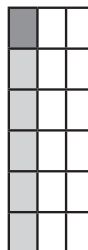
	Yes	No
$8 \div 10$	Ⓐ	Ⓑ
$1\frac{2}{8}$	Ⓒ	Ⓓ
$\frac{1}{10} + \frac{1}{10} + \frac{1}{10} + \frac{1}{10} + \frac{1}{10} + \frac{1}{10} + \frac{1}{10} + \frac{1}{10}$	Ⓔ	Ⓕ
$\frac{10}{8}$	Ⓖ	Ⓗ
$10 \times \frac{1}{8}$	Ⓘ	Ⓙ
$10 \div 8$	Ⓚ	Ⓛ

- 15** This model represents a fraction divided by a whole number.

Complete the division equation that the model represents.

Write your answers in the blanks.

\_\_\_\_\_  $\div$  \_\_\_\_\_ = \_\_\_\_\_







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