i-Ready Classroom Mathematics

OREGON EDITION

Oregon Teacher Toolbox

Resource Sampler

Grade 4

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.

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

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

E/S = Available in English and Spanish

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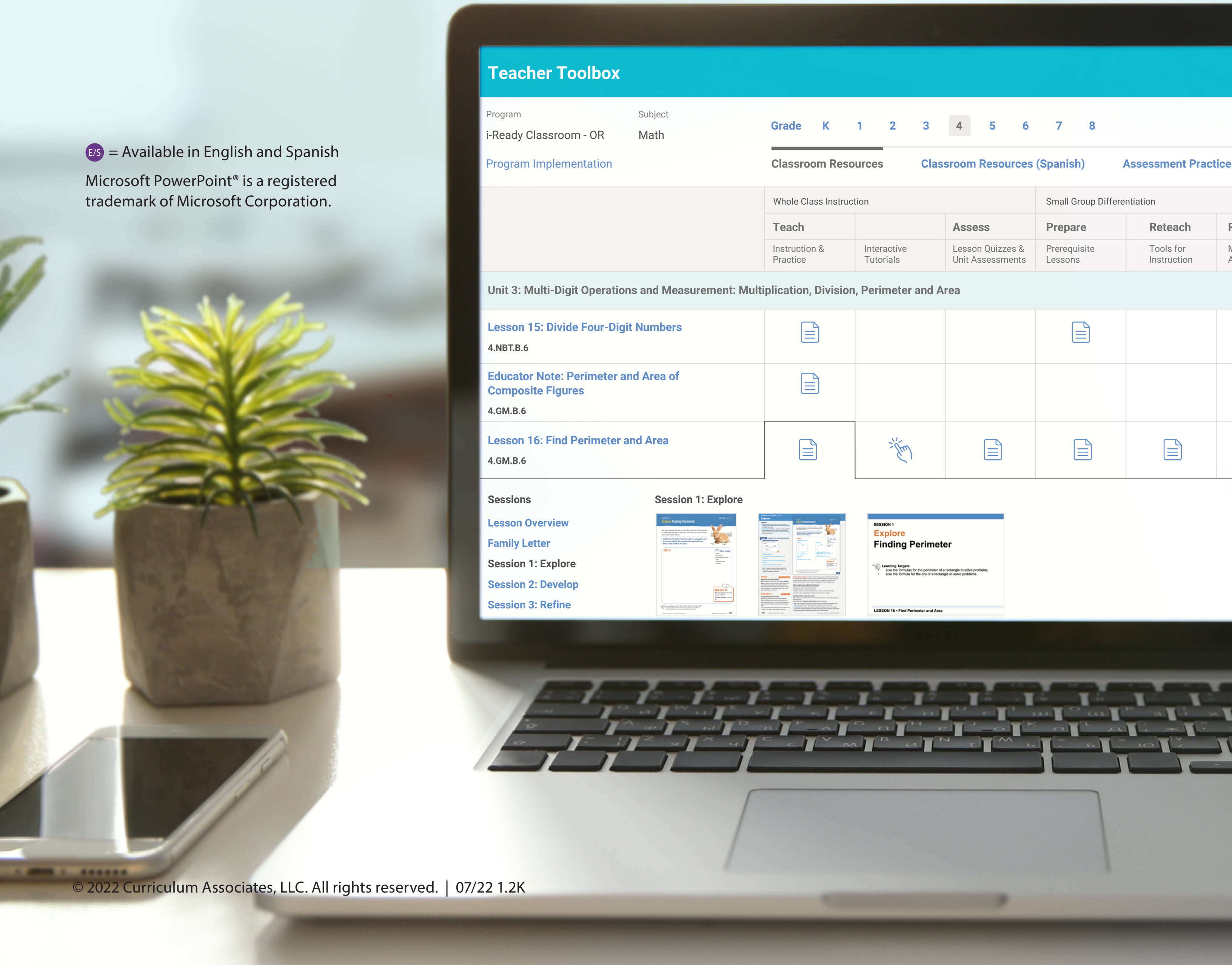

Student Growth

- Interactive Tutorials E/S
- Literacy Connection Activities E/S
- Math Center Activities *(On Level, Below Level, and Above Level)* E/S
- Student Worktext PDFs E/S
- PowerPoint® Slides *(Editable)* E/S
- Prerequisite Lessons E/S
- Professional Learning Videos
- Teacher's Guide PDFs
- Tools for Instruction E/S
- 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 4: Fractions, Decimals, and Measurement: Addition, Subtraction, and Multiplication, Lesson 20: Add and Subtract Fractions**.

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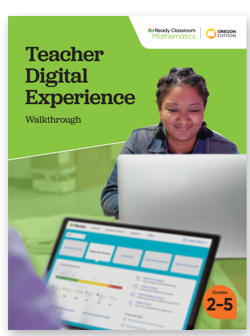
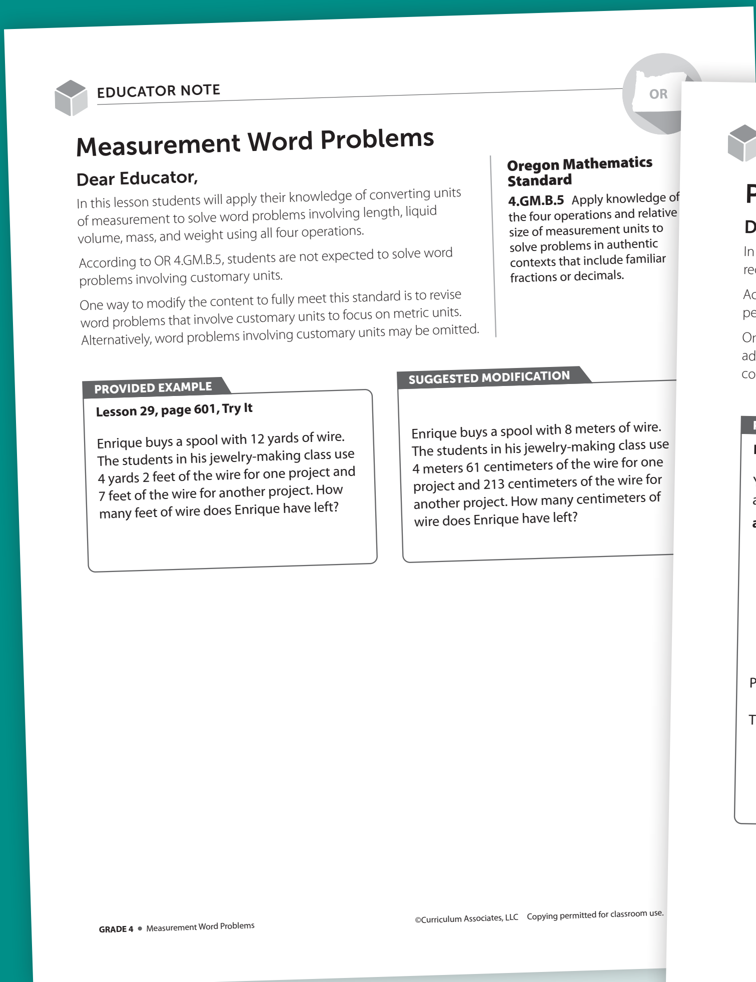


Check out the Teacher Digital Experience Walkthrough to see more digital resources!

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

OR

Measurement Word Problems

Dear Educator,

In this lesson students will apply their knowledge of converting units of measurement to solve word problems involving length, liquid volume, mass, and weight using all four operations.

According to OR 4.GM.B.5, students are not expected to solve word problems involving customary units.

One way to modify the content to fully meet this standard is to revise word problems that involve customary units to focus on metric units. Alternatively, word problems involving customary units may be omitted.

Oregon Mathematics Standard

4.GM.B.5 Apply knowledge of the four operations and relative size of measurement units to solve problems in authentic contexts that include familiar fractions or decimals.

PROVIDED EXAMPLE

Lesson 29, page 601, Try It

Enrique buys a spool with 12 yards of wire. The students in his jewelry-making class use 4 yards 2 feet of the wire for one project and 7 feet of the wire for another project. How many feet of wire does Enrique have left?

SUGGESTED MODIFICATION

Enrique buys a spool with 8 meters of wire. The students in his jewelry-making class use 4 meters 61 centimeters of the wire for one project and 213 centimeters of the wire for another project. How many centimeters of wire does Enrique have left?

GRADE 4 • Measurement Word Problems

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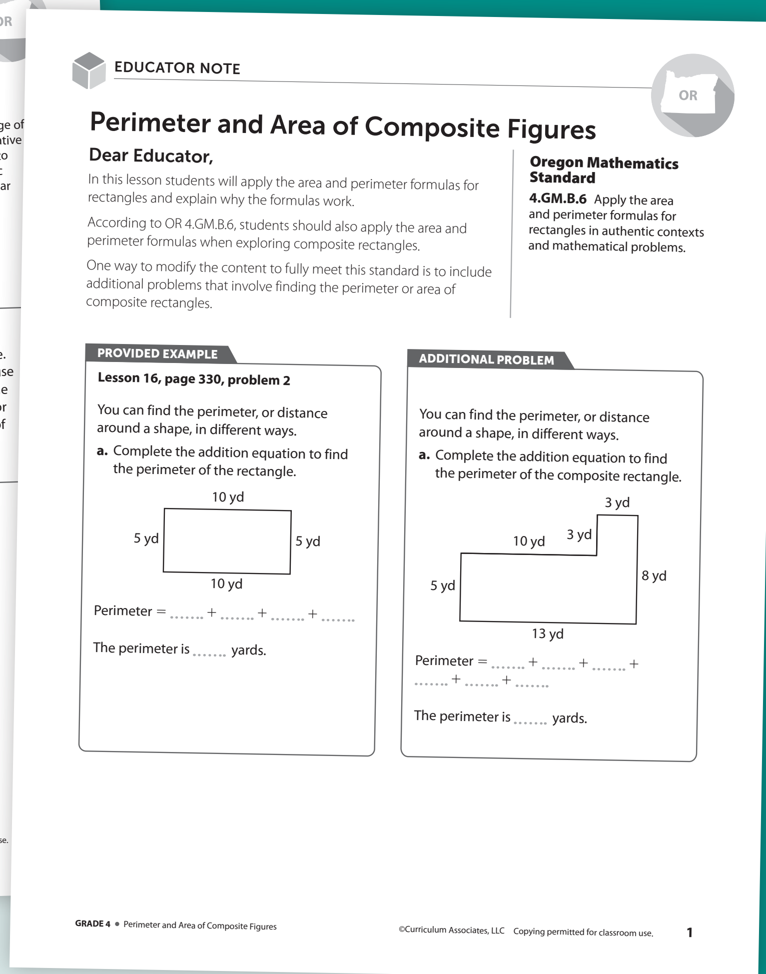

EDUCATOR NOTE

OR

Perimeter and Area of Composite Figures

Dear Educator,

In this lesson students will apply the area and perimeter formulas for rectangles and explain why the formulas work.

According to OR 4.GM.B.6, students should also apply the area and perimeter formulas when exploring composite rectangles.

One way to modify the content to fully meet this standard is to include additional problems that involve finding the perimeter or area of composite rectangles.

Oregon Mathematics Standard

4.GM.B.6 Apply the area and perimeter formulas for rectangles in authentic contexts and mathematical problems.

PROVIDED EXAMPLE

Lesson 16, page 330, problem 2

You can find the perimeter, or distance around a shape, in different ways.

a. Complete the addition equation to find the perimeter of the rectangle.

Perimeter = ... + ... + ... + ...

The perimeter is .... yards.

ADDITIONAL PROBLEM

You can find the perimeter, or distance around a shape, in different ways.

a. Complete the addition equation to find the perimeter of the composite rectangle.

Perimeter = ... + ... + ... + ... + ... + ...

The perimeter is .... yards.

GRADE 4 • Perimeter and Area of Composite Figures

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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:

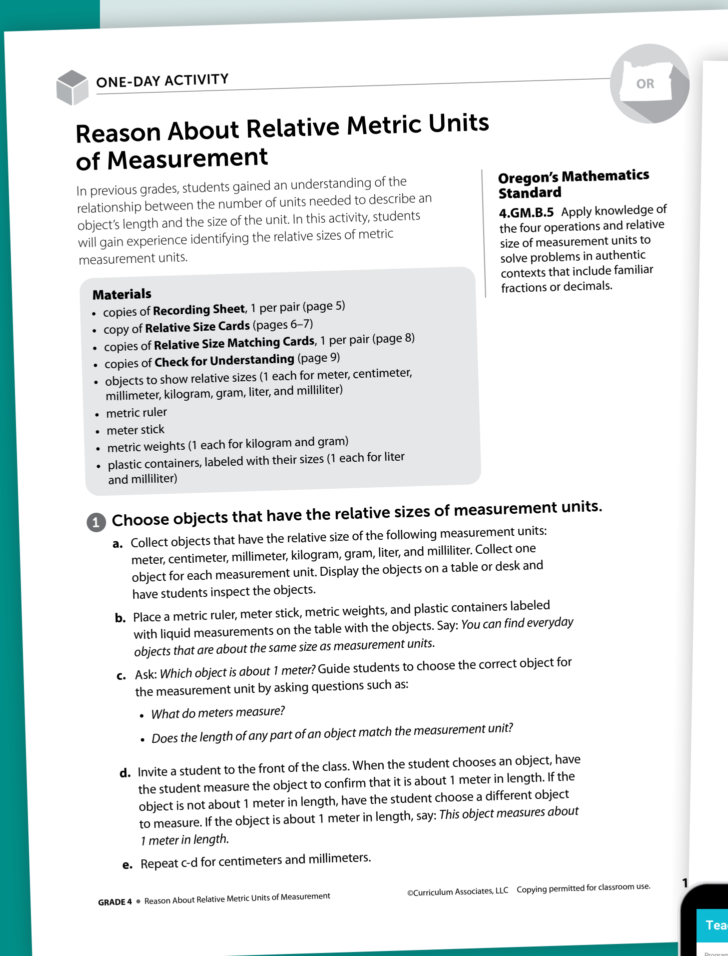
- Oregon Mathematics Standards require different content limits or vocabulary terms OR
- A clear modification can tailor the *i-Ready Classroom Mathematics, Oregon Edition* instructional program to address Oregon expectations

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

OR

Reason About Relative Metric Units of Measurement

In previous grades, students gained an understanding of the relationship between the number of units needed to describe an object's length and the size of the unit. In this activity, students will gain experience identifying the relative sizes of metric measurement units.

Oregon's Mathematics Standard

4.GM.B.5 Apply knowledge of the four operations and relative size of measurement units to solve problems in authentic contexts that include familiar fractions or decimals.

Materials

- copies of **Recording Sheet**, 1 per pair (page 5)
- copy of **Relative Size Cards** (pages 6–7)
- copies of **Relative Size Matching Cards**, 1 per pair (page 8)
- copies of **Check for Understanding** (page 9)
- objects to show relative sizes (1 each for meter, centimeter, millimeter, kilogram, gram, liter, and milliliter)
- metric ruler
- meter stick
- metric weights (1 each for kilogram and gram)
- plastic containers, labeled with their sizes (1 each for liter and milliliter)

1 Choose objects that have the relative sizes of measurement units.

a. Collect objects that have the relative size of the following measurement units: meter, centimeter, millimeter, kilogram, gram, liter, and milliliter. Collect one object for each measurement unit. Display the objects on a table or desk and have students inspect the objects.

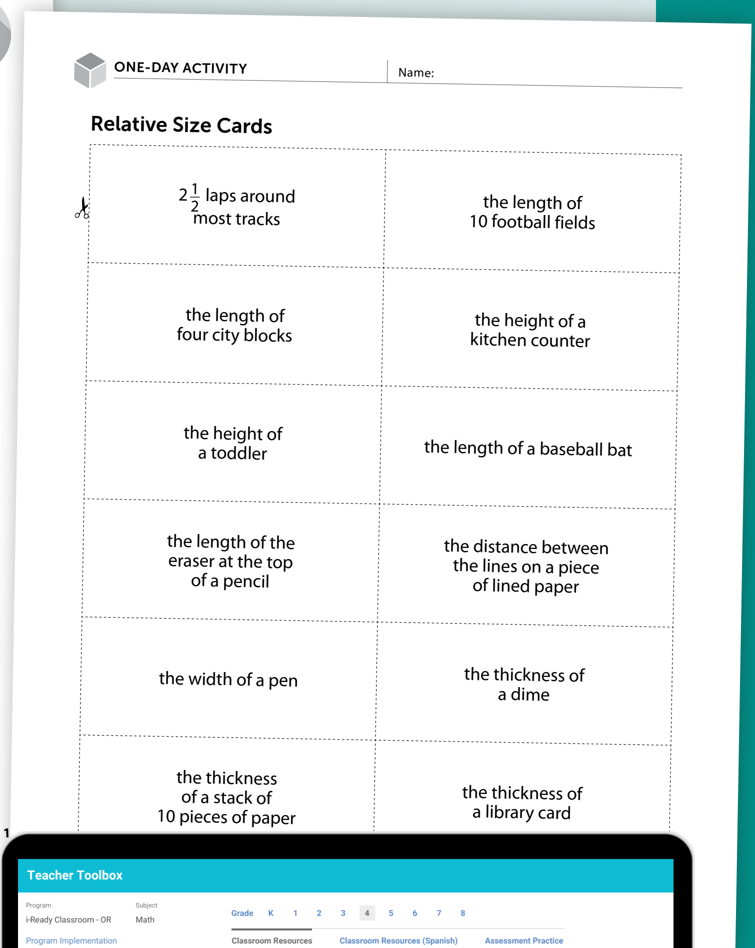
b. Place a metric ruler, meter stick, metric weights, and plastic containers labeled with liquid measurements on the table with the objects. Say: *You can find everyday objects that are about the same size as measurement units.*

c. Ask: *Which object is about 1 meter?* Guide students to choose the correct object for the measurement unit by asking questions such as:
- *What do meters measure?*
- *Does the length of any part of an object match the measurement unit?*

d. Invite a student to the front of the class. When the student chooses an object, have the student measure the object to confirm that it is about 1 meter in length. If the object is not about 1 meter in length, have the student choose a different object to measure. If the object is about 1 meter in length, say: *This object measures about 1 meter in length.*

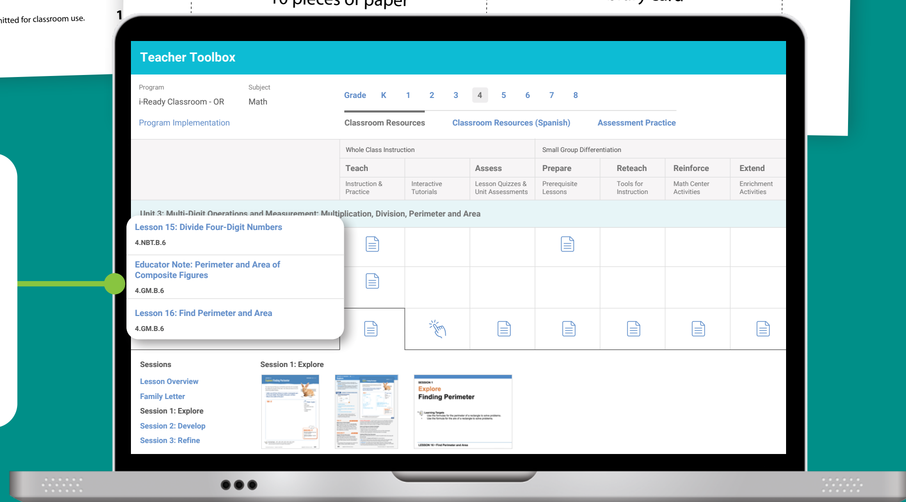
e. Repeat c-d for centimeters and millimeters.

GRADE 4 • Reason About Relative Metric Units of Measurement ©Curriculum Associates, LLC Copying permitted for classroom use. 1


ONE-DAY ACTIVITY Name:

Relative Size Cards

$2\frac{1}{2}$ laps around most tracks	the length of 10 football fields
the length of four city blocks	the height of a kitchen counter
the height of a toddler	the length of a baseball bat
the length of the eraser at the top of a pencil	the distance between the lines on a piece of lined paper
the width of a pen	the thickness of a dime
the thickness of a stack of 10 pieces of paper	the thickness of a library card



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

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Perimeter and Area of Composite Figures

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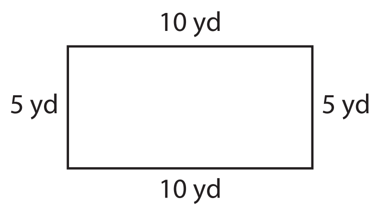


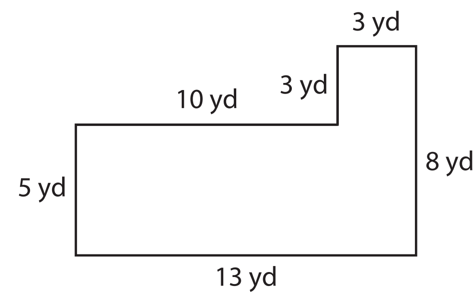
Perimeter = ... + ... + ... + ...

The perimeter is .... yards.

ADDITIONAL PROBLEM

You can find the perimeter, or distance around a shape, in different ways.

a. Complete the addition equation to find the perimeter of the composite rectangle.



Perimeter = ... + ... + ... + ... + ... + ...

The perimeter is .... yards.

ONE-DAY ACTIVITY

OR

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In previous grades, students gained an understanding of the relationship between the number of units needed to describe an object's length and the size of the unit. In this activity, students will gain experience identifying the relative sizes of metric measurement units.

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1 Choose objects that have the relative sizes of measurement units.

a. Collect objects that have the relative size of the following measurement units: meter, centimeter, millimeter, kilogram, gram, liter, and milliliter. Collect one object for each measurement unit. Display the objects on a table or desk and have students inspect the objects.

b. Place a metric ruler, meter stick, metric weights, and plastic containers labeled with liquid measurements on the table with the objects. Say: *You can find everyday objects that are about the same size as measurement units.*

c. Ask: *Which object is about 1 meter?* Guide students to choose the correct object for the measurement unit by asking questions such as:

- *What do meters measure?*
- *Does the length of any part of an object match the measurement unit?*

d. Invite a student to the front of the class. When the student chooses an object, have the student measure the object to confirm that it is about 1 meter in length. If the object is not about 1 meter in length, have the student choose a different object to measure. If the object is about 1 meter in length, say: *This object measures about 1 meter in length.*

e. Repeat c-d for centimeters and millimeters.

ONE-DAY ACTIVITY

f. Ask: *Which object has a mass of about 1 kilogram?* Guide students to choose the correct object for the measurement unit by asking questions such as:

- *What do kilograms measure?*
- *Does the mass of any object match the measurement unit?*

g. Invite another student to the front of the class. When the student chooses an object, have the student hold a 1-kilogram weight in one hand and the object in the other to confirm that it is about 1 kilogram in mass. If the object is not about 1 kilogram in mass, have the student choose a different object. If the object is about 1 kilogram in mass, say: *This object has a mass of about 1 kilogram.* Pass the object and 1-kilogram weight around the class so students can feel the mass of about 1 kilogram.

h. Repeat f-g for grams.

i. Ask: *Which object can hold about 1 liter?* Guide students to choose the correct object for the measurement unit by asking questions such as:

- *What do liters measure?*
- *Can any of the objects hold liquid? If so, does the amount of liquid the object can hold match the measurement unit?*

j. Invite another student to the front of the class. When the student chooses an object, have the student fill the 1-liter plastic container with water. Then pour the water into the object. If the object does not have a volume of about 1 liter, have the student choose a different object. If the object does have a volume of about 1 liter, say: *This object holds about 1 liter of liquid.*

k. Repeat i-j for milliliters.

l. Say: *1 kilometer is 1,000 meters.* Ask: *Can you think of an object that is about 1 kilometer in length?* **($2\frac{1}{2}$ laps around most tracks; the length of 10 football fields; the length of 4 city blocks)**

m. Ask: *How could using objects or distances that are about the same size as a measurement unit help you?* **(It could help you find which measurement unit is larger or smaller.)** Guide students to understand the concept of relative size by asking questions such as:

- *About how long is 1 meter? 1 centimeter? 1 millimeter?* **(the length of a baseball bat; the width of a thumbnail; the width of a wire)**
- *Is 1 meter or 1 centimeter longer? 1 millimeter or 1 centimeter? How do you know?* **(1 meter is longer because a baseball bat is longer than the width of a thumbnail; 1 centimeter is longer because the width of a thumbnail is longer than the width of a wire.)**

ONE-DAY ACTIVITY

- *About how heavy is 1 kilogram? 1 gram?* **(a pineapple; a stick of gum)**
- *Is 1 kilogram or 1 gram heavier? How do you know?* **(1 kilogram is heavier because a pineapple is heavier than a stick of gum.)**
- *About how much liquid is 1 liter? 1 milliliter?* **(four glasses of water; the amount of water to fill an eyedropper)**
- *Is 1 liter or 1 milliliter more liquid? How do you know?* **(1 liter is more liquid because there is more liquid in four glasses of water than in an eyedropper.)**

2 Identify the relative sizes of measurement units.

a. Before the start of the activity, cut out and place the **Relative Size Cards** around the classroom.

b. Provide pairs of students with **Recording Sheet** 2.

c. Tell students that you have placed cards around the classroom. Instruct pairs of students to find a card with an example of an object or a distance that is about the same as a measurement unit on the Recording Sheet. Then have students write the example on the Recording Sheet and put the card back where it was found. Ask: *How do you decide which card matches the measurement unit?* **(I think about the size of the object on the card and select the measurement unit that is closest to it.)**

d. When students have finished finding an example for each measurement unit, ask each pair to share an example that is about the same size as 1 meter. **(the height of a kitchen counter, the height of a toddler, the length of a baseball bat)**

e. Instruct students to think of another object that is about the same size as 1 meter. Have students write their example on the Recording Sheet. **(the width of a door)**

f. Have students complete the table for each measurement unit on the Recording Sheet. **(Check student work for the correct relative size examples to be written for each measurement unit.)**

3 Match measurements with objects that have the same relative size.

a. Provide pairs of students with **Relative Size Matching Cards**.

b. Instruct pairs to shuffle the cards and lay them facedown in a grid.

c. Have students take turns flipping over two cards. If the cards include a measurement unit and an object that has the same relative size, the student keeps the cards. Otherwise, the student flips the cards back over. The student with the most cards after all cards have been collected wins the game!

ONE-DAY ACTIVITY

4 Check for understanding.

Provide students with **Check for Understanding**. Have students fill in the missing parts of the table. **(Check that students chose appropriately sized objects for each given measurement unit and an appropriate measurement unit for each given object.)**

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 writes *the amount of liquid in an eyedropper* for millimeter,	have confused millimeters with milliliters.	having the student underline *meter* in the word *millimeter* and try again.
the student provides an inaccurate relative size for one of the units of measurement,	have difficulty comparing that unit of measurement to an object's length, mass, or volume.	having the student use a metric ruler, meter stick, metric weight, or plastic container to find objects that are the same length, mass, or volume as the measurement unit.

ONE-DAY ACTIVITY

Name:

Recording Sheet 2

Measurement Unit	About the same size as _______. (card example)	About the same size as _______. (my example)
kilometer		
meter		
centimeter		
millimeter		
kilogram		
gram		
liter		
milliliter		

ONE-DAY ACTIVITY | Name:

Relative Size Cards

$2\frac{1}{2}$ laps around most tracks	the length of 10 football fields
the length of four city blocks	the height of a kitchen counter
the height of a toddler	the length of a baseball bat
the length of the eraser at the top of a pencil	the distance between the lines on a piece of lined paper
the width of a pen	the thickness of a dime
the thickness of a stack of 10 pieces of paper	the thickness of a library card

ONE-DAY ACTIVITY | Name:

Relative Size Cards *continued*

the mass of a textbook	the mass of a pineapple
the mass of a baseball bat	the mass of a dollar bill
the mass of a paper clip	the mass of a pen cap
the volume of a large bottle of water	the volume of a small vase
the amount of liquid that can fit in four water glasses	the amount of water that can fit in an eyedropper
the amount of water that can fit in a bottle cap	the amount of water in 10 drops

ONE-DAY ACTIVITY | Name:

Relative Size Matching Cards

kilometer	meter	centimeter
millimeter	kilogram	gram
liter	milliliter	the length of 10 football fields
the height of a kitchen counter	the width of a pen	the thickness of a dime
the mass of a textbook	the mass of a paper clip	the amount of liquid that can fit in four water glasses
the amount of water that can fit in an eyedropper		

ONE-DAY ACTIVITY

Name:

Check for Understanding

Measurement Unit	About the same size as _______.
millimeter	
kilometer	
	the mass of a dollar bill
	the amount of water that can fit in a bottle cap
kilogram	
	the height of a toddler
liter	
	the distance between the lines on a piece of lined paper

Lesson-Level Resources

Lesson 20: Add and Subtract Fractions

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On Level 24

Above Level 26

Below Level 28

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FLUENCY AND SKILLS PRACTICE
LESSON 20

Name: ______

Adding Fractions

Write the missing numbers in the boxes to make each addition problem true.

1. $\frac{1}{6} + \frac{4}{6} = \frac{\square}{6}$

2. $\frac{1}{8} + \frac{4}{8} = \frac{\square}{\square}$

3. $\frac{1}{10} + \frac{4}{10} = \frac{\square}{\square}$

4. $\frac{4}{12} + \frac{\square}{\square} = \frac{7}{12}$

5. $\frac{4}{6} + \frac{\square}{\square} = \frac{7}{6}$

6. $\frac{4}{3} + \frac{\square}{\square} = \frac{7}{3}$

7. $\frac{\square}{\square} + \frac{2}{4} = \frac{5}{4}$

8. $\frac{\square}{\square} + \frac{2}{10} = \frac{5}{10}$

9. $\frac{\square}{\square} + \frac{2}{8} = \frac{5}{8}$

10. $\frac{\square}{6} + \frac{2}{6} = \frac{\square}{6}$

11. $\frac{\square}{5} + \frac{1}{5} = \frac{\square}{5}$

12. $\frac{4}{10} + \frac{\square}{10} = \frac{\square}{10}$

13. Write a number from 1–12 in each box so that the addition problem is true.

$$\frac{\square}{12} + \frac{5}{\square} = \frac{\square}{12}$$

FLUENCY AND SKILLS PRACTICE
LESSON 20

Name:

Subtracting Fractions

Solve each problem.

1. Sammy has $\frac{4}{5}$ of his art project left to paint. He paints $\frac{2}{5}$ of the project. What fraction of the project is left to paint?

2. Marianne has $\frac{6}{8}$ of a yard of green ribbon. She uses $\frac{3}{8}$ of a yard for a craft project. How much green ribbon is left?

3. Yuna plans to run 1 mile. She has run $\frac{7}{10}$ of a mile so far. What fraction of a mile does she have left to run?

4. Alex and Brady are helping to pack books into a box. Together they pack $\frac{7}{12}$ of the books. Alex packs $\frac{4}{12}$ of the books. What fraction of the books does Brady pack?

FLUENCY AND SKILLS PRACTICE | Name:

LESSON 20

Subtracting Fractions *continued*

5 On Monday, Adam walks $\frac{3}{10}$ of a mile to the store and then $\frac{4}{10}$ of a mile to the park. How far does he walk in all?

6 Javier has $\frac{7}{8}$ of a cup of flour. He uses $\frac{3}{8}$ of a cup in a recipe. How much flour does Javier have left?

7 Shawna practices piano for $\frac{4}{6}$ of an hour and takes a break. Shawna then practices for $\frac{2}{6}$ of an hour more. How long does Shawna practice in all?

8 Kailee has finished $\frac{4}{5}$ of her math homework so far. What fraction of her math homework does she have left to finish?

9 Explain one way to check your work to problem 2.

FLUENCY AND SKILLS PRACTICE Name: ____________________

LESSON 20

Decomposing Fractions

Find three ways to decompose each fraction into a sum of other fractions with the same denominator.

1 $\frac{3}{4} = \frac{1}{4} + \frac{1}{4} + \_\_\_\_$

$\frac{3}{4} = \frac{2}{4} + \_\_\_\_$

$\frac{3}{4} = \frac{1}{4} + \_\_\_\_$

2 $\frac{7}{8} = \frac{6}{8} + \_\_\_\_$

$\frac{7}{8} = \frac{5}{8} + \_\_\_\_$

$\frac{7}{8} = \frac{4}{8} + \_\_\_\_$

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

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

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

4 $\frac{5}{6} = \_\_\_\_ + \frac{3}{6}$

$\frac{5}{6} = \frac{1}{6} + \_\_\_\_ + \_\_\_\_$

$\frac{5}{6} = \frac{1}{6} + \frac{1}{6} + \_\_\_\_ + \_\_\_\_ + \_\_\_\_$

5 $\frac{9}{12} = \_\_\_\_ + \frac{5}{12}$

$\frac{9}{12} = \frac{3}{12} + \frac{3}{12} + \_\_\_\_ + \_\_\_\_ + \_\_\_\_$

$\frac{9}{12} = \_\_\_\_ + \_\_\_\_ + \_\_\_\_$

6 $\frac{8}{10} = \_\_\_\_ + \frac{4}{10}$

$\frac{8}{10} = \frac{2}{10} + \frac{3}{10} + \_\_\_\_ + \_\_\_\_ + \_\_\_\_$

$\frac{8}{10} = \_\_\_\_ + \_\_\_\_ + \_\_\_\_$

7 Describe your strategy for finding the missing numbers.

Tools for Instruction

Add and Subtract Fractions

Objective Add and subtract fractions using number lines.	**Materials** plastic page protector, dry erase marker, **Blank Number Line** (page 3)

Students have previously used fraction models to add and subtract fractions with like denominators. Adding and subtracting fractions can sometimes be difficult for students because they do not have a strong understanding of fractions in general. This activity will have students solving problems involving fractions by having them add and subtract fractions on number lines. This will prepare students for solving problems involving fractions with unlike denominators.

Step by Step 15–20 minutes

1 Add using a number line.

- Provide the student with a copy of **Blank Number Line** (page 3) in a plastic page protector and a dry erase marker.
- Say: *Izzy and Holden are painting a mural. Izzy paints $\frac{3}{10}$ of the mural, and Holden paints $\frac{5}{10}$ of the mural. How much of the mural have they painted in all?* Tell the student that they will model solving this problem using a number line.
- Have the student identify that the addition problem $\frac{3}{10} + \frac{5}{10}$ can be used to solve this problem.
- Discuss with the student that the two addends have 10 as the denominator. Have the student label the number line by tenths.
- Point out that the student must start at $\frac{3}{10}$ on the number line and make five jumps to the right. Then have the student identify the sum to solve the problem. ($\frac{8}{10}$ of the mural)

Support English Learners The student may have difficulty identifying the directions *right* and *left*. Have the student label the ends of the number line *right* and *left* until they feel comfortable without the labels.

2 Subtract using a number line.

- Tell the student that they will model solving another problem using a number line. Say: *A recipe calls for $\frac{6}{8}$ of a cup of flour. You have $\frac{1}{8}$ of a cup of flour. How much more flour do you need?*
- Have the student identify that the subtraction problem $\frac{6}{8} - \frac{1}{8} = ?$ can be used to solve this problem.
- Ask: *How can you use the number line to solve?* (Sample answer: Divide the number line into eighths. Start at $\frac{6}{8}$. Jump one space to the left.)
- Have the student use their process to find the difference to solve the problem. ($\frac{5}{8}$ of a cup of flour)

3 Solve problems using a number line.

- Have the student solve more problems using the number line.
- Say: *You read $\frac{8}{12}$ of a book last week. This week, you read $\frac{3}{12}$ of the book. How much of the book did you read in all?* ($\frac{11}{12}$ of the book)
- Say: *You had 1 batch of cookies. Your family ate $\frac{8}{10}$ of the batch. How much of the batch is left?* ($\frac{2}{10}$ of the batch)

Check for Understanding

Provide the following problem for the student to solve using the number line: *A recipe calls for $\frac{2}{3}$ of a cup of milk and $\frac{2}{3}$ of a cup of water. How much liquid is needed in all?* ($\frac{4}{3}$ cups)

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 subtracts,	have interpreted the situation as a comparison.	having the student act out the problem to identify that it requires addition.
the student struggles to label the number line,	not understand that the denominator tells how many parts one whole is divided into.	pointing out that both fractions have 3 as their denominator, so the number line should show thirds.
the student does not know how many jumps to make,	not understand the meanings of the parts of fractions.	modeling several fractions on a number line.

Name____

Blank Number Line

CENTER ACTIVITY ●● | Name:

LESSON 20

On Level is shown here.

Different Ways to Show Sums

What You Need

- number cube (1–6)
- 15 game markers in one color
- 15 game markers in a different color
- Game Board

What You Do

1. Take turns. Roll the number cube. Find the fraction sum next to that toss in the table.
2. Find one expression on the **Game Board** that has that sum. Your partner checks your expression.
3. If you are correct, place your game marker on that expression. If you are not correct or if there are no uncovered expressions with that sum, your turn ends.
4. Continue until all the expressions on the **Game Board** have been covered.
5. The player with the greater number of game markers on the **Game Board** wins.

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

Check Understanding

Use twelfths to write three different addition expressions that equal $\frac{5}{12}$.

Go Further

Write two addition expressions using sixths that equal $\frac{8}{6}$ and are NOT on the **Game Board.** Exchange papers with your partner to check.

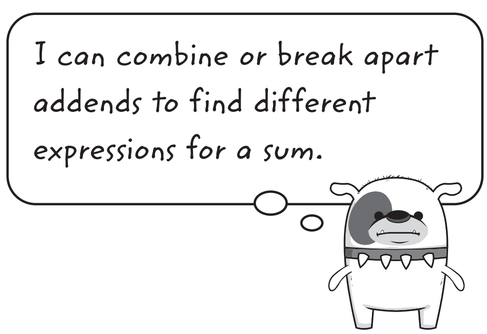
CENTER ACTIVITY ●●
LESSON 20

Partner A:

Partner B:

Different Ways to Show Sums Game Board

$\frac{1}{6}+\frac{1}{6}+\frac{1}{6}+\frac{5}{6}$	$\frac{1}{6}+\frac{1}{6}+\frac{1}{6}+\frac{1}{6}+\frac{1}{6}$	$\frac{2}{8}+\frac{3}{8}+\frac{4}{8}$	$\frac{2}{6}+\frac{1}{6}+\frac{1}{6}$	$\frac{1}{8}+\frac{1}{8}+\frac{1}{8}$
$\frac{4}{6}+\frac{2}{6}+\frac{1}{6}+\frac{1}{6}$	$\frac{4}{8}+\frac{3}{8}$	$\frac{2}{6}+\frac{3}{6}$	$\frac{4}{8}+\frac{1}{8}+\frac{1}{8}+\frac{1}{8}$	$\frac{2}{6}+\frac{1}{6}+\frac{1}{6}+\frac{1}{6}$
$\frac{2}{8}+\frac{2}{8}+\frac{3}{8}$	$\frac{3}{6}+\frac{1}{6}+\frac{1}{6}$	$\frac{1}{8}+\frac{1}{8}+\frac{1}{8}+\frac{1}{8}+\frac{3}{8}$	$\frac{3}{6}+\frac{5}{6}$	$\frac{1}{6}+\frac{2}{6}+\frac{1}{6}$
$\frac{3}{8}+\frac{3}{8}+\frac{3}{8}$	$\frac{2}{6}+\frac{2}{6}+\frac{1}{6}$	$\frac{1}{8}+\frac{2}{8}$	$\frac{2}{6}+\frac{2}{6}$	$\frac{1}{8}+\frac{2}{8}+\frac{1}{8}+\frac{2}{8}+\frac{1}{8}$
$\frac{1}{6}+\frac{2}{6}+\frac{1}{6}+\frac{1}{6}$	$\frac{4}{8}+\frac{3}{8}+\frac{1}{8}+\frac{1}{8}$	$\frac{2}{6}+\frac{2}{6}+\frac{4}{6}$	$\frac{1}{6}+\frac{1}{6}+\frac{1}{6}+\frac{1}{6}$	$\frac{2}{8}+\frac{1}{8}$



CENTER ACTIVITY ●●● Name:

LESSON 20

Above Level is shown here.

Different Ways to Show Sums

What You Need

- number cube (1–6)
- 15 game markers in one color
- 15 game markers in a different color
- Game Board

What You Do

1. Take turns. Roll the number cube. Find the fraction sum next to that toss in the table.
2. Find one expression on the **Game Board** that has that sum. Your partner checks your expression.
3. If you are correct, place your game marker on that expression. If you are not correct or if there are no uncovered expressions with that sum, your turn ends.
4. Your partner names another expression with the same sum that is NOT on the **Game Board.**
5. Continue until all the expressions on the **Game Board** have been covered.
6. The player with the greater number of game markers on the **Game Board** wins.

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

Check Understanding

Use twelfths to write four different addition expressions that equal $\frac{5}{12}$.

Go Further

Write all the expressions you can think of to find the sum of $\frac{6}{8}$. Exchange papers with your partner to check.

CENTER ACTIVITY ●●●
LESSON 20

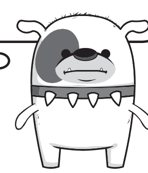
Partner A: ____________________

Partner B: ____________________

Different Ways to Show Sums Game Board

$\frac{1}{6}+\frac{1}{6}+\frac{1}{6}+\frac{5}{6}$	$\frac{1}{6}+\frac{1}{6}+\frac{1}{6}+\frac{1}{6}+\frac{1}{6}$	$\frac{2}{8}+\frac{3}{8}+\frac{4}{8}$	$\frac{2}{6}+\frac{1}{6}+\frac{1}{6}$	$\frac{2}{8}+\frac{2}{8}+\frac{5}{8}$
$\frac{4}{6}+\frac{2}{6}+\frac{1}{6}+\frac{1}{6}$	$\frac{4}{8}+\frac{3}{8}$	$\frac{2}{6}+\frac{3}{6}$	$\frac{4}{8}+\frac{1}{8}+\frac{1}{8}+\frac{1}{8}$	$\frac{2}{6}+\frac{1}{6}+\frac{1}{6}+\frac{1}{6}$
$\frac{2}{8}+\frac{2}{8}+\frac{3}{8}$	$\frac{3}{6}+\frac{1}{6}+\frac{1}{6}$	$\frac{1}{8}+\frac{1}{8}+\frac{1}{8}+\frac{1}{8}+\frac{3}{8}$	$\frac{3}{6}+\frac{5}{6}$	$\frac{1}{6}+\frac{2}{6}+\frac{1}{6}$
$\frac{3}{8}+\frac{3}{8}+\frac{3}{8}$	$\frac{2}{6}+\frac{2}{6}+\frac{1}{6}$	$\frac{1}{8}+\frac{2}{8}$	$\frac{2}{6}+\frac{2}{6}$	$\frac{1}{8}+\frac{2}{8}+\frac{1}{8}+\frac{2}{8}+\frac{1}{8}$
$\frac{1}{6}+\frac{2}{6}+\frac{1}{6}+\frac{1}{6}$	$\frac{4}{8}+\frac{3}{8}+\frac{1}{8}+\frac{1}{8}$	$\frac{2}{6}+\frac{2}{6}+\frac{4}{6}$	$\frac{1}{6}+\frac{1}{6}+\frac{1}{6}+\frac{1}{6}$	$\frac{2}{8}+\frac{1}{8}$

I can combine and break apart addends to find different expressions for a sum.



CENTER ACTIVITY ● | Name:
LESSON 20

Below Level is shown here.

Different Ways to Show Sums

What You Need

- number cube (1–6)
- fraction strips
- 15 game markers in one color
- 15 game markers in a different color
- Game Board

What You Do

1. Take turns. Roll the number cube. Find the fraction sum next to that toss in the table.
2. Use fraction strips to find one expression on the **Game Board** equal to that sum.
3. Your partner checks your work. If you are correct, place your game marker on that expression. If you are not correct or if there are no uncovered expressions with that sum, your turn ends.
4. Continue until all the expressions on the **Game Board** have been covered.
5. The player with the greater number of game markers on the **Game Board** wins.

Toss	Sum
1	$\frac{6}{8}$
2	$\frac{5}{6}$
3	$\frac{3}{8}$
4	$\frac{4}{6}$
5	$\frac{3}{6}$
6	$\frac{7}{8}$

Check Understanding

Use twelfths to write two different addition expressions that equal $\frac{5}{12}$.

Go Further

Write an addition expression using eighths that equals $\frac{7}{8}$ and is NOT on the **Game Board**. Exchange papers with your partner to check.

CENTER ACTIVITY ●
LESSON 20

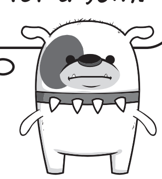
Partner A: ______________________

Partner B: ______________________

Different Ways to Show Sums Game Board

$\frac{1}{8}+\frac{3}{8}+\frac{2}{8}$	$\frac{1}{6}+\frac{2}{6}$	$\frac{3}{8}+\frac{3}{8}$	$\frac{2}{6}+\frac{1}{6}+\frac{1}{6}$	$\frac{1}{8}+\frac{1}{8}+\frac{1}{8}$
$\frac{1}{6}+\frac{1}{6}+\frac{1}{6}$	$\frac{4}{8}+\frac{3}{8}$	$\frac{2}{6}+\frac{3}{6}$	$\frac{2}{8}+\frac{2}{8}+\frac{2}{8}$	$\frac{1}{6}+\frac{4}{6}$
$\frac{2}{8}+\frac{2}{8}+\frac{3}{8}$	$\frac{3}{6}+\frac{1}{6}+\frac{1}{6}$	$\frac{2}{8}+\frac{4}{8}$	$\frac{1}{8}+\frac{3}{8}+\frac{3}{8}$	$\frac{1}{6}+\frac{2}{6}+\frac{1}{6}$
$\frac{2}{6}+\frac{1}{6}$	$\frac{2}{6}+\frac{2}{6}+\frac{1}{6}$	$\frac{1}{8}+\frac{2}{8}$	$\frac{2}{6}+\frac{2}{6}$	$\frac{1}{8}+\frac{2}{8}+\frac{4}{8}$
$\frac{2}{8}+\frac{5}{8}$	$\frac{5}{8}+\frac{1}{8}$	$\frac{4}{8}+\frac{1}{8}+\frac{1}{8}$	$\frac{1}{6}+\frac{3}{6}$	$\frac{2}{8}+\frac{1}{8}$

I can combine and break apart addends to find different expressions for a sum.



ENRICHMENT ACTIVITY

LESSON 20

Name:

Addition Grids

Your Challenge

In the addition grid below, the sum of each **row**, **column**, and **diagonal** is 2. Fill in the missing numbers to complete the grid.

	$\frac{12}{12}$	$\frac{5}{12}$
$\frac{11}{12}$		$\frac{9}{12}$

ENRICHMENT ACTIVITY
LESSON 20

Name:

Addition Grids *continued*

Make your own addition grid by filling in all the squares in the grid below so that the sum of each **row** and **column** is 2. (The diagonals will have a different sum.) Then, draw a blank grid on another sheet of paper, fill in four of the squares of your puzzle, and share with a friend.

$\frac{8}{15}$		
	$\frac{5}{15}$	

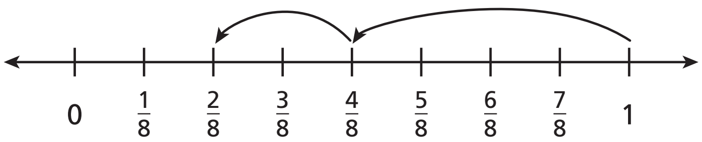
LESSON 20 • QUIZ

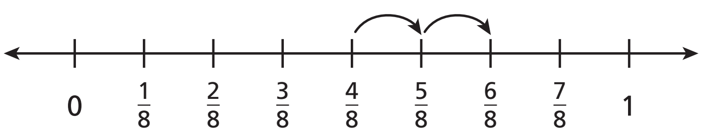
Name:

Digital Comprehension Checks are also available.

Solve the problems.

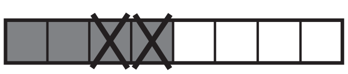
1 Nobu is making a bracelet with 8 equal sections. He makes $\frac{4}{8}$ of the bracelet on Saturday and $\frac{2}{8}$ of the bracelet on Sunday. Which model can be used to find the total fraction of the bracelet that Nobu makes on Saturday and Sunday? Choose all the correct answers.

Ⓐ 

Ⓑ 

Ⓒ 

Ⓓ 

Ⓔ 

2 In a science class, students spend $\frac{2}{10}$ of the time reading and $\frac{7}{10}$ of the time doing an experiment. They spend the rest of the time cleaning up. What fraction of science class time do students spend cleaning?

Ⓐ $\frac{9}{10}$

Ⓑ $\frac{5}{10}$

Ⓒ $\frac{9}{20}$

Ⓓ $\frac{1}{10}$

LESSON 20 • QUIZ

Name:

3 Is $\frac{4}{10} + \frac{3}{10}$ equivalent to $\frac{9}{10} - \frac{3}{10}$? Explain your answer.

____

____

____

4 Draw a line from each equation to the missing fraction to show how to decompose $\frac{7}{12}$ three different ways.

Equations	**Fractions**
a. $\frac{7}{12} = \frac{2}{12} + \square + \frac{2}{12}$	$\frac{4}{12}$
b. $\frac{4}{12} + \square + \frac{1}{12} = \frac{7}{12}$	$\frac{1}{12}$
c. $\square + \frac{4}{12} + \frac{2}{12} = \frac{7}{12}$	$\frac{3}{12}$
	$\frac{5}{12}$
	$\frac{2}{12}$

5 Find $\frac{5}{6} - \frac{3}{6}$.

Use a number line or an area model to show your thinking.

Solution ____

Unit-Level Resources

Unit 4: Fractions, Decimals, and Measurement: Addition, Subtraction, and Multiplication

Unit Game 35
Literacy Connection 37
Mid-Unit Assessment (Form A) 41
Unit Assessment (Form A) 46

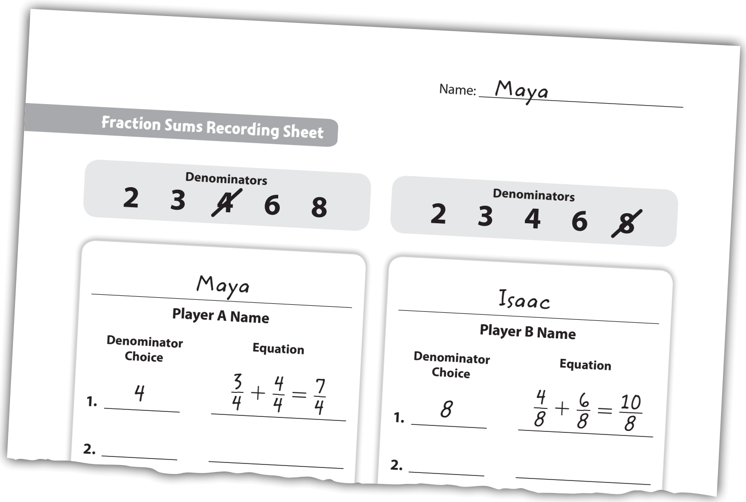
GAME | Name:

UNIT 4

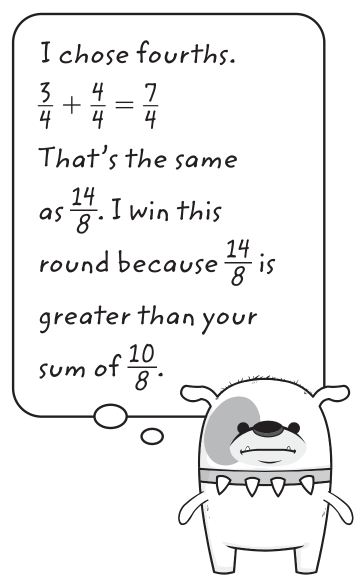
Fraction Sums

What you need: *Fraction Sums* Recording Sheet, 2 number cubes (1–6)

Directions



- Players each choose a denominator from the list on the Recording Sheet. Players write their numbers in the *Denominator Choice* column of the Recording Sheet.
- Player A rolls the number cubes and makes two fractions using the numbers rolled as the numerators along with the chosen denominator.
- Player A writes and solves an addition equation with the two fractions as the addends on the Recording Sheet.
- Player B takes a turn following the same steps as Player A.
- Players compare the two fraction sums. The player with the greater sum wins the round.
- In each round, players choose a denominator that they have not used yet. The player with more wins after 5 rounds wins the game.



GAME | Name:

UNIT 4

Fraction Sums Recording Sheet

Denominators
2 3 4 6 8

Denominators
2 3 4 6 8

Player A Name

Denominator Choice	Equation
1.	
2.	
3.	
4.	
5.	

Final Score Player A

Player B Name

Denominator Choice	Equation
1.	
2.	
3.	
4.	
5.	

Final Score Player B

Gold

by Carl Gelb

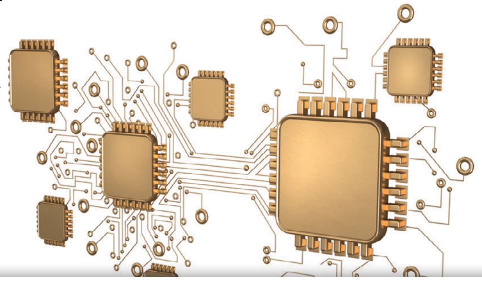
1 People have valued gold for thousands of years. Because of the metal's durability, gold ornaments, statues, and jewelry look as brilliant today as when the artists of ancient Egypt and other cultures crafted them thousands of years ago. Gold is one of nature's true wonders.

2 **Properties:** Gold is an element. It cannot be broken down into simpler substances. Gold is also very malleable, which means it is easily flattened into a thin sheet. Gold is also ductile, which means it can be pulled into a wire. For these reasons, gold is useful in making jewelry. One ounce of gold can become 187 square feet of gold leaf or one mile of gold wire. Gold also conducts heat and electricity very well.

3 **Alloys:** Pure gold is very soft. Because it's so soft, gold is often mixed with other metals to make a mixture, or alloy, that is stronger than gold alone. Adding silver, copper, and zinc to gold produces the color we associate with jewelry.

4 **Today's Uses:** In the past, gold was mainly used for jewelry, statues, and other decorations. But today we use gold for more than just its beauty. It is an excellent conductor of electricity. This means that electricity flows through it easily. As a conductor, gold coats electrical parts inside our cell phones and computers. It helps speed the flow of electricity. Thin films of gold also reflect radiation on satellites, the sun visors of space suits, and the windows of skyscrapers. Gold's uses are many and important!

Computer Microchips



Photography Credit: (top) optimarc/Shutterstock/(bottom) Iaroslav Neliubov/Shutterstock

LITERACY CONNECTION
UNIT 4

Name:

Literacy Connection: Science

"Gold": Fractions

Solve each problem. Show your work.

1 A jewelry maker buys a bar of pure gold. She needs $\frac{6}{8}$ of an ounce of pure gold to make a piece of jewelry. Unfortunately, she does not have any measuring tools that measure in eighths. What is a fraction equivalent to $\frac{6}{8}$?

Use a model to show a fraction that is equivalent to $\frac{6}{8}$. Label the model.

________ $= \frac{6}{8}$

2 A jewelry company makes equal-sized alloy bars to sell to local jewelry makers. Each alloy bar contains $\frac{4}{10}$ of an ounce of pure gold, $\frac{3}{5}$ of an ounce of silver, and $\frac{2}{3}$ of an ounce of zinc. Which metal is used the most in the alloy?

________ is the metal used the most in the alloy bars.

LITERACY CONNECTION
UNIT 4

Name:

Literacy Connection: Science *continued*

3 Quinn is making an alloy of gold and silver. She mixes $\frac{6}{10}$ of an ounce of gold and $\frac{4}{10}$ of an ounce of silver to make the alloy. She uses $\frac{3}{10}$ of an ounce of the alloy to make a necklace. How many ounces of the alloy does Quinn have after making the necklace?

Quinn has ____________ of an ounce of the alloy.

4 In one day, a cell phone maker uses $\frac{2}{8}$ of an ounce of gold for all the conductors in the phones it makes. It also uses $\frac{1}{8}$ of an ounce of gold for all the electrical coils in the phones. How much gold does the factory use each day to make cell phones?

The factory uses ________ of an ounce of gold each day.

LITERACY CONNECTION
UNIT 4

Name:

Literacy Connection: Science *continued*

5 A jewelry store has 12 golden nuggets to use to make jewelry. They use 3 golden nuggets to make earrings, 4 golden nuggets to make rings, and the rest of the golden nuggets to make bracelets. What fraction of golden nuggets does the jewelry store use to make the bracelets?

The store uses ________ of the gold nuggets to make bracelets.

UNIT 4 • MID-UNIT ASSESSMENT 1
FORM A

Name:

Solve the problems.

1 In art class, Luke spends $\frac{2}{6}$ of the time drawing and $\frac{3}{6}$ of the time painting. He spends the rest of the time working with clay. What fraction of art class time does Luke spend working with clay?

Ⓐ $\frac{1}{6}$

Ⓑ $\frac{5}{12}$

Ⓒ $\frac{5}{6}$

Ⓓ $\frac{7}{12}$

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

2 Draw a line from each equation to the missing fraction to show how to decompose $\frac{7}{8}$ three different ways.

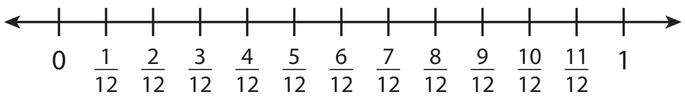
Equations	**Fractions**
a. $\frac{7}{8} = \frac{2}{8} + \square + \frac{2}{8}$	$\frac{5}{8}$
b. $\frac{3}{8} + \square + \frac{2}{8} = \frac{7}{8}$	$\frac{4}{8}$
c. $\square + \frac{3}{8} + \frac{3}{8} = \frac{7}{8}$	$\frac{3}{8}$
	$\frac{2}{8}$
	$\frac{1}{8}$

UNIT 4 • MID-UNIT ASSESSMENT 1 | Name: ____________________

FORM A continued

3 Which expression has a value of $\frac{7}{12}$?

Use the number line below to help you choose your answer.



Ⓐ $\frac{6}{12} - \frac{1}{12}$

Ⓑ $\frac{5}{12} + \frac{2}{12}$

Ⓒ $\frac{11}{12} - \frac{5}{12}$

Ⓓ $\frac{4}{12} + \frac{5}{12}$

4 The shaded model shows $\frac{3}{4}$. Describe how to shade the other model to show a fraction equivalent to $\frac{3}{4}$. Then name the equivalent fraction.

Solution ____

____

____

5 Rocco needs $\frac{2}{8}$ of a cup of shredded cheese for a recipe. He only has a $\frac{1}{4}$-cup measuring cup, a $\frac{1}{3}$-cup measuring cup, and a $\frac{1}{2}$-cup measuring cup. Which should he use and why?

Solution ____

____

____

UNIT 4 • MID-UNIT ASSESSMENT 1

Name:

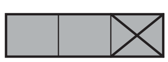
FORM A continued

6 Decide if each comparison is true.

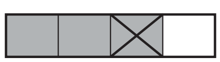
Choose *True* or *False* for each comparison.

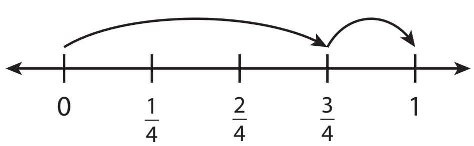
	True	False
$\frac{3}{5} > \frac{5}{10}$	Ⓐ	Ⓑ
$\frac{1}{8} > \frac{1}{4}$	Ⓒ	Ⓓ
$\frac{4}{12} = \frac{1}{3}$	Ⓔ	Ⓕ
$\frac{4}{5} > \frac{9}{10}$	Ⓖ	Ⓗ
$\frac{5}{8} < \frac{3}{4}$	Ⓘ	Ⓙ

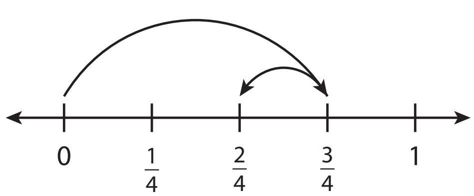
7 Riley has $\frac{3}{4}$ of a yard of lace. She cuts off $\frac{1}{4}$ of a yard to decorate her scrapbook. Which models can be used to find the total fraction of a yard of lace that Riley has left? Choose all the correct answers.

Ⓐ 

Ⓑ 

Ⓒ 

Ⓓ 

Ⓔ 

UNIT 4 • MID-UNIT ASSESSMENT 1 | Name: ______________________

FORM A continued

8 Sadir rides his bike $\frac{8}{12}$ of a mile to the park and $\frac{3}{4}$ of a mile to the library.

Which statement correctly describes a way to compare $\frac{8}{12}$ and $\frac{3}{4}$?

Ⓐ $8 > 3$, so $\frac{8}{12} > \frac{3}{4}$

Ⓑ $\frac{3}{4} = \frac{9}{12}$, so $\frac{8}{12} < \frac{3}{4}$

Ⓒ $\frac{8}{12} = \frac{2}{3}$ and $2 < 3$, so $\frac{8}{12} < \frac{3}{4}$

Ⓓ $\frac{8}{12} > \frac{1}{2}$ and $\frac{3}{4} < \frac{1}{2}$, so $\frac{8}{12} > \frac{3}{4}$

9 Fill in the missing numbers to find an equivalent fraction to $\frac{2}{5}$.

Write the answers in the boxes.

$$\frac{2}{5} = \frac{2 \times 4}{5 \times \boxed{}} = \frac{\boxed{}}{\boxed{}}$$

10 Draw and label a model to find the value of $\frac{2}{6} + \frac{3}{6}$. Then write and solve an equation that matches the model.

Solution ____

UNIT 4 • MID-UNIT ASSESSMENT 1

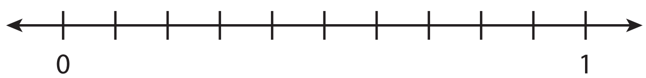
Name:

FORM A continued

11 Compare $\frac{4}{10}$ and $\frac{3}{5}$.

Part A

Place the points $\frac{4}{10}$ and $\frac{3}{5}$ on the number line.



Part B

Write a comparison for $\frac{4}{10}$ and $\frac{3}{5}$. Explain how you found your answer.

Solution ____

12 Find $\frac{7}{8} - \frac{4}{8}$.

Use a number line or an area model to show your thinking.

Solution ____

UNIT 4 • UNIT ASSESSMENT
FORM A

Name: ____________________

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

Solve the problems.

1 Decide if each comparison is true.
Choose *True* or *False* for each comparison.

	True	False
$\frac{2}{10} = \frac{4}{5}$	Ⓐ	Ⓑ
$\frac{4}{6} > \frac{1}{2}$	Ⓒ	Ⓓ
$\frac{3}{4} < \frac{3}{12}$	Ⓔ	Ⓕ
$\frac{3}{8} < \frac{3}{4}$	Ⓖ	Ⓗ
$\frac{5}{12} > \frac{2}{6}$	Ⓘ	Ⓙ

2 In cooking class, Louis spends $\frac{3}{8}$ of the time making bread and $\frac{4}{8}$ of the time making soup. He spends the rest of the time cooking chicken. What fraction of cooking class does he cook chicken?

Ⓐ $\frac{7}{16}$

Ⓑ $\frac{1}{8}$

Ⓒ $\frac{7}{8}$

Ⓓ $\frac{9}{16}$

3 Draw and label a model to find the value of $\frac{5}{12} + \frac{2}{12}$. Then write and solve an equation that matches the model.

Solution ____________________

UNIT 4 • UNIT ASSESSMENT

Name:

FORM A continued

4 Marla finds an equivalent fraction for $\frac{9}{12}$. The equivalent fraction's denominator is 4. Which statement correctly describes how she finds the equivalent fraction?

Ⓐ Add the same number to 9 and 12.

Ⓑ Subtract the same number from 9 and 12.

Ⓒ Multiply 9 and 12 by the same whole number.

Ⓓ Divide 9 and 12 by the same whole number.

5 Complete the equation to show how to find the sum of $\frac{60}{100}$ and $\frac{3}{10}$. Write your answers in the boxes.

$$\frac{60}{100} + \frac{\square}{100} = \frac{\square}{\square}$$

6 Lucas has one \$10 bill and two \$5 bills. He spends \$5.40 on lunch and \$6.30 on a T-shirt. How much money does Lucas have left? Show your work.

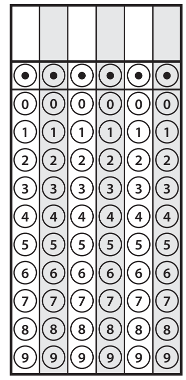
Solution ______________________________

UNIT 4 • UNIT ASSESSMENT

Name:

FORM A continued

7 Write $\frac{8}{100}$ as a decimal. Record your answer on the grid. Then fill in the bubbles.



8 Carolyn's hair growth was 2.1 centimeters since her last haircut. Delia's hair growth was 2.03 centimeters.

Carolyn uses this place value chart to help her compare the growth.

	Ones	.	Tenths	Hundredths
Carolyn's hair growth (cm)	2	.	1	
Delia's hair growth (cm)	2	.	0	3

Part A

Compare the hair growth of Carolyn and Delia using $>$, $<$, or $=$. Use the place value chart to explain your answer.

____

____

____

____

Part B

Since her last haircut, Breanna's hair growth was more than Delia's, but less than Carolyn's. How many centimeters could Breanna's hair have grown? Show your work.

______________________________________ centimeters

Name:

9 Flora plants roses in $\frac{59}{100}$ of her garden and daisies in $\frac{2}{10}$ of her garden. Which expressions show how to find the total fraction of the garden in which Flora plants roses and daisies? Choose all the correct answers.

Ⓐ $\frac{5}{10} + \frac{2}{10}$

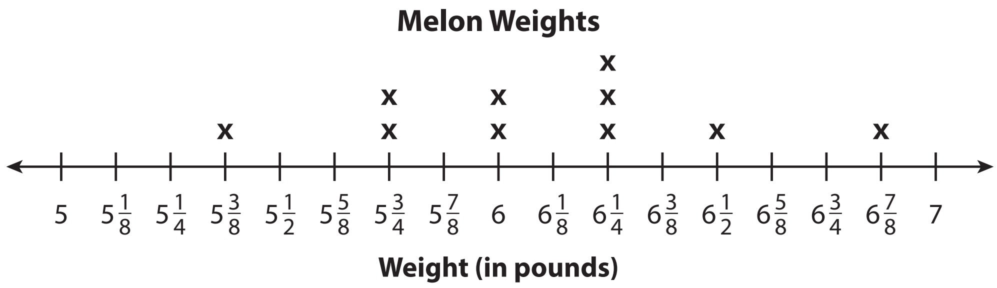
Ⓑ $\frac{59}{10} + \frac{2}{10}$

Ⓒ $\frac{59}{100} + \frac{2}{10}$

Ⓓ $\frac{59}{100} + \frac{2}{100}$

Ⓔ $\frac{59}{100} + \frac{20}{100}$

10 The line plot below shows the weights of melons on display at a county fair.



What is the difference in weight between the heaviest and lightest melons?

Ⓐ 1 pound

Ⓑ $1\frac{1}{8}$ pounds

Ⓒ $1\frac{4}{8}$ pounds

Ⓓ 2 pounds

UNIT 4 • UNIT ASSESSMENT

Name:

FORM A continued

11 Which fraction and decimal pair is equivalent?

Ⓐ $\frac{5}{100}$ and 0.5

Ⓑ $\frac{61}{100}$ and 6.1

Ⓒ $\frac{9}{10}$ and 0.9

Ⓓ $\frac{3}{10}$ and 0.03

12 Which equations are true? Choose all the correct answers.

Ⓐ $3\frac{3}{12} - 2\frac{2}{12} = 1\frac{1}{12}$

Ⓑ $6\frac{5}{8} - 2\frac{1}{8} = 4\frac{4}{8}$

Ⓒ $6\frac{2}{5} + 3\frac{1}{5} = 9\frac{3}{10}$

Ⓓ $1\frac{30}{100} + 2\frac{16}{100} = 3\frac{46}{100}$

Ⓔ $4\frac{3}{6} - 2\frac{2}{6} = 2\frac{5}{6}$

13 Lucy spends $1\frac{3}{4}$ hours riding her bike on Tuesday. She spends $2\frac{3}{4}$ hours riding her bike on Wednesday. Lucy says the total time she rides her bike on Tuesday and Wednesday is between 3 hours and 4 hours.

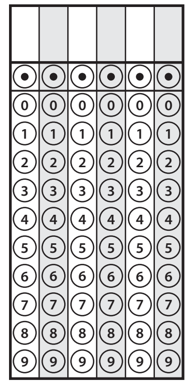
Is she correct? Explain.

UNIT 4 • UNIT ASSESSMENT

Name: ______________________________

FORM A continued

14 Tyler plays mini golf for $3\frac{1}{3}$ hours. During this time, he plays on 4 courses. Each course takes the same amount of time. How long, in minutes, does Tyler play on each course? Record your answer on the grid. Then fill in the bubbles.



15 Mia feeds her puppy $\frac{5}{6}$ of a cup of food 3 times each day. Write and solve a multiplication equation that Mia can use to find the total amount of food she feeds her puppy each day.

Mia feeds her puppy ____________ cups of food each day.

16 Mr. Lee has a rope. The total length of the rope is 5 meters. He cuts off 350 centimeters of rope to use in his garden and another 75 centimeters to hang a bird feeder. What is the length in centimeters of the rope he has left?

Ⓐ 75 centimeters

Ⓑ 150 centimeters

Ⓒ 275 centimeters

Ⓓ 425 centimeters

17 An artist needs to mix at least 2,000 milliliters of paint to make a color. They use $1\frac{1}{4}$ liters of white paint, $\frac{1}{2}$ of a liter of blue paint, and 700 milliliters of green paint to make the color. Does the artist mix enough paint? Show your work.

Solution ____

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