Fourth Grade
Family Resource Bundle

Grade 4

ANSWER KEY Text #1 "Strong for Skeena"

by Julia Tozier 2015

1. RL.KID.2

PART A: Which statement best expresses the theme of "Strong for Skeena"?

A. Inner strength is just as powerful as physical strength.
B. Loss is something that everyone must face eventually.
C. You have to be physically strong before you can be mentally strong.
D. Humans and animals are capable of having close friendship.

2. RL.KID.1

PART B: Which detail from the text best supports the answer to Part A?

A. "'Uncle Stan said I can choose five dogs for my sled team when I feel I'm strong enough,' I say to Skeena" (Paragraph 1)
B. "'I'm taller than anyone else in seventh grade. But he says being strong means something else, too, and when I have that strength I will know.'" (Paragraph 4)
C. "My knees hit the ground beside her. Her ears are rags, a gash bleeds freely below her right eye, and her fur is clumped with blood." (Paragraph 15)
D. "I lose track of what he's doing as Skeena's eyes lock on mine. They are powerful magnets; I lean close to her. I realize that I'm crying." (Paragraph 26)

3. RL.CS.4

What does Matt mean when he compares Skeena's ears to "rags" (Paragraph 15)?

A. Skeena's ears are soft.
B. Skeena's ears are torn.
C. Skeena's ears are clean.
D. Skeena's ears are ugly.

4. RL.CS.4

How does paragraph 26 contribute to the overall structure of the story?

A. It emphasizes how much Matt and Skeena care about each other.
B. It reveals that Skeena may not be able to be a lead dog.
C. It stresses how serious Skeena's injuries are.
D. It shows that Matt cares more about Skeena being a lead than her health.

5. RL.KID.3

How does Skeena's injury change Matt? Cite evidence from the text in your response.

1. **Answers will vary; students should discuss how Skeena's injury helps Matt realize that he has the inner strength needed to choose a sled team. Students should discuss that Matt doesn't have this strength before Skeena is hurt, as he tells her, "'I'm taller than anyone else in seventh grade. But he says being strong means something else, too, and when I have that strength I will know'" (Paragraph 4). When Matt finds Skeena injured, he must act fast to save her (Paragraph 16). Matt not only shows physical strength when he takes Skeena to the vet, but mental and emotional strength through his responsible care of her (Paragraphs 18-25). It is when Matt leaves Skeena to tend to his other chores (Paragraph 30), another example of his inner strength and maturity, that he reveals, "'I am strong enough now'" (Paragraph 31).**

ANSWER KEY Text #2 "Reading to Max"

by Heather Klassen 2016

1. RL.KID.2

PART A: What is the main theme of the short story?

A. There's nothing harder than losing a close friend.
B. With enough practice, you can improve at anything.
C. It's important to help animals in need, when you can.
D. Humans and animals can offer each other support and friendship.

2. RL.KID.1

PART B: Which detail from the story best supports the answer to Part A?

A. "Ben stopped. Reading was hard. Still, he really wanted to visit the cats, so he took a flyer anyway." (Paragraph 3)
B. "When it arrived, Ben got to read to Max again. Ben read and read while Max purred and purred." (Paragraph 12)
C. "'I wish we could adopt Max,' Ben said to Dad. He knew they couldn't. Mom had allergies." (Paragraph 19)
D. "Still, he was surprised when Ms. Delgado gave him the Most Improved Reader award." (Paragraph 22)

3. RL.KID.3

How does Ben feels about Max getting adopted?

A. He doesn't want to lose his reading buddy.
B. He wants Max to find a good family.
C. He thinks that Max would miss him a lot.
D. He doesn't want Max to be taken from the other cats.

4. RL.KID.3

How does reading to Max affect Ben?

A. He learns to develop better social skills.
B. He realizes how much he loves animals.
C. He decides he wants to work with animals when he grows up.
D. He becomes much better at reading.

5. RL.CS.5

Why is it important to the story that Ben talks to Mrs. Patel about Max?

1. **Answers will vary; students should discuss how by talking to Mrs. Patel about Max, Ben helps her decide to adopt Max. For example, after talking to Mrs. Patel about Max, she says, "'Max sounds like a special cat'" (Paragraph 17). It's because of this conversation that Mrs. Patel gets the idea to adopt Max. Later in the story. When Mrs. Patel reveals that she adopted Max, she says, "'Max is a special cat'" (Paragraph 25). In all, if Ben hadn't talked to Mrs. Patel about Max, she likely never would have adopted him.**

RELATED MEDIA LINKS and Descriptions

Related Media #1: Sled Dogs: More Than Meets the Eye
Show this video to students to provide them with additional information about sled dogs. Ask students to discuss the relationship between people and their sled dogs shown in the video. How does this compare to the relationship that Matt has with Skeena? (3:41)

Related Media #2: Children Help Get Shelter Dogs' Tails Wagging by Reading to Them | NBC Nightly News
Show this video to students to provide them with a news story about kids reading to shelter dogs. Ask students to discuss how the dogs in the video benefit from being read to. How does this compare to how Ben benefits from reading to Max? Do you think Max, and the other cats in the shelter, benefit from being read to? Why or why not? (2:12)

Grab and Go Writing Checklists

Grades 3-5 Short Response

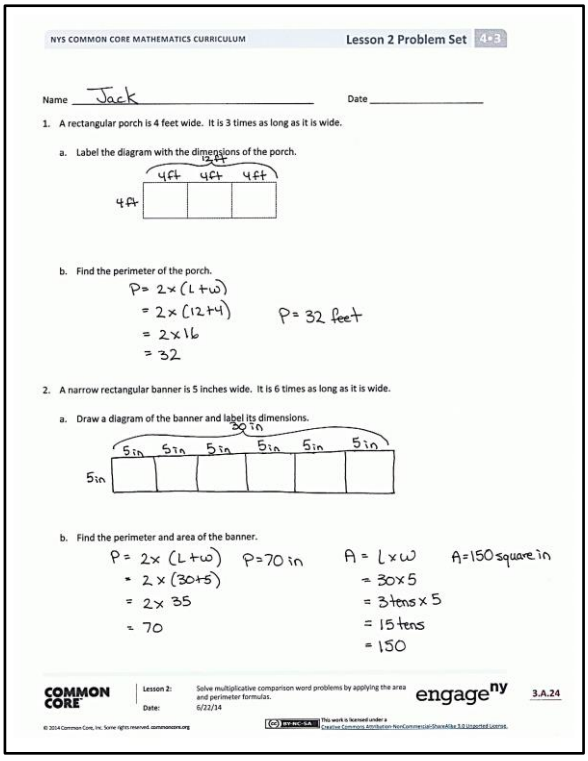
The following checklists have been provided for families to use as a reference for student writing expectations.

Informational /Explanatory	❑ Begins with a topic sentence that addresses the main question ❑ Explains an idea that supports the topic sentence (at least 1-2 sentences) ❑ Uses evidence (facts and details) from the text to support the idea ❑ Explains how the text evidence supports the topic and idea (at least 1-2 sentences) ❑ Ends with a concluding statement
Entire Response	❑ Has few errors in sentence formatting, capitalization, punctuation, and spelling.

Opinion	❑ Begins by stating an opinion in response to the main question ❑ Explains an idea that supports the opinion (at least 1-2 sentences) ❑ Uses evidence (facts and details) from the text to support the opinion ❑ Explains how the text evidence supports the idea and opinion (at least 1-2 sentences) ❑ Ends with a concluding statement
Entire Response	❑ Has few errors in sentence formatting, capitalization, punctuation, and spelling.

Problem Set (10 minutes)

Students should do their personal best to complete the Problem Set within the allotted 10 minutes. For some classes, it may be appropriate to modify the assignment by specifying which problems they work on first. Some problems do not specify a method for solving. Students should solve these problems using the RDW approach used for Application Problems.


NYS COMMON CORE MATHEMATICS CURRICULUM Lesson 2 Problem Set 4•3

Name Jack Date

1. A rectangular porch is 4 feet wide. It is 3 times as long as it is wide.

a. Label the diagram with the dimensions of the porch.

12 ft
4ft 4ft 4ft
4ft

b. Find the perimeter of the porch.

P = 2 × (L + W)
= 2 × (12 + 4)
= 2 × 16
= 32
P = 32 feet

2. A narrow rectangular banner is 5 inches wide. It is 6 times as long as it is wide.

a. Draw a diagram of the banner and label its dimensions.

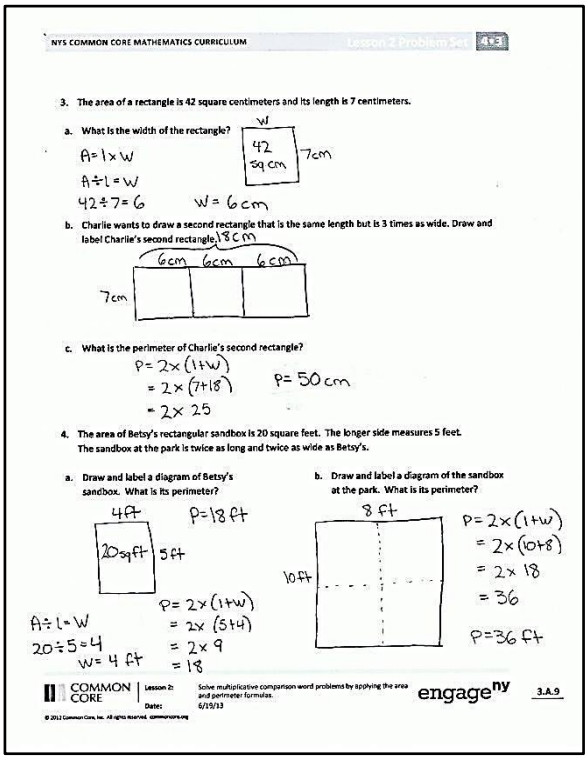
30 in
5in 5in 5in 5in 5in 5in
5in

b. Find the perimeter and area of the banner.

P = 2 × (L + W) P = 70 in
= 2 × (30 + 5)
= 2 × 35
= 70

A = L × W A = 150 square in
= 30 × 5
= 3 tens × 5
= 15 tens
= 150

COMMON CORE Lesson 2: Solve multiplicative comparison word problems by applying the area and perimeter formulas. Date: 6/22/14 engage^ny 3.A.24


NYS COMMON CORE MATHEMATICS CURRICULUM Lesson 2 Problem Set 4•3

3. The area of a rectangle is 42 square centimeters and its length is 7 centimeters.

a. What is the width of the rectangle?

W
42 sq cm
7cm

A = l × w
A ÷ l = w
42 ÷ 7 = 6 w = 6 cm

b. Charlie wants to draw a second rectangle that is the same length but is 3 times as wide. Draw and label Charlie's second rectangle.

18 cm
6cm 6cm 6cm
7cm

c. What is the perimeter of Charlie's second rectangle?

P = 2 × (l + w)
= 2 × (7 + 18)
= 2 × 25
P = 50 cm

4. The area of Betsy's rectangular sandbox is 20 square feet. The longer side measures 5 feet. The sandbox at the park is twice as long and twice as wide as Betsy's.

a. Draw and label a diagram of Betsy's sandbox. What is its perimeter?

4ft P = 18 ft
20 sq ft 5 ft

A ÷ l = w
20 ÷ 5 = 4
w = 4 ft

P = 2 × (l + w)
= 2 × (5 + 4)
= 2 × 9
= 18

b. Draw and label a diagram of the sandbox at the park. What is its perimeter?

8 ft
10 ft

P = 2 × (l + w)
= 2 × (10 + 8)
= 2 × 18
= 36
P = 36 ft

COMMON CORE Lesson 2: Solve multiplicative comparison word problems by applying the area and perimeter formulas. Date: 6/19/13 engage^ny 3.A.9

Student Debrief (10 minutes)

Lesson Objective: Solve multiplicative comparison word problems by applying the area and perimeter formulas.

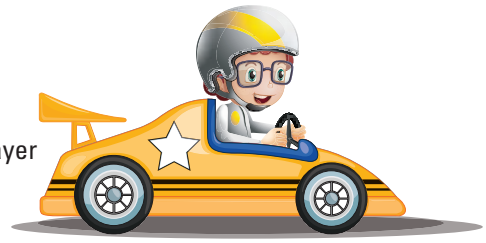
The Student Debrief is intended to invite reflection and active processing of the total lesson experience.

Invite students to review their solutions for the Problem Set. They should check work by comparing answers with a partner before going over answers as a class. Look for misconceptions or misunderstandings that can be addressed in the Debrief. Guide students in a conversation to debrief the Problem Set and process the lesson.

Any combination of the questions below may be used to lead the discussion.

- Discuss the relationship between the area of an original rectangle and the area of a different rectangle whose width is 3 times as long as it was to start with.
- Discuss the relationship between the perimeters of the sandboxes in Problem 4.
- For Problem 4(e), why isn't the area twice as much if the length and width are twice as much?
- What conclusion can you make about the areas of two rectangles when the widths are the same but the length of one is twice as much as the length of the other?
- What conclusion can you make about the areas of two rectangles when the length and width of one rectangle are each twice as much as the length and width of the other rectangle?

I Get Around!



Building Fluency: build rectangles and find perimeter

Materials: pair of dice, recording sheet per player, and centimeter grid paper for each player

Number of Players: 2

Directions:

1. Player 1 tosses the dice and constructs a rectangle on the centimeter grid by marking length on a horizontal line according to the number thrown on one die and width according to the number on the other die.
2. The player then outlines the entire rectangle, colors it in and records length, width and perimeter on the score sheet.
3. After four rounds, a total score is determined by the sum of the perimeters.
4. Highest score wins!

Variation/Extension: Teacher could add the area concept to this game. Once students understand the game they can create recording sheets in their math notebook.

PLAYER 1

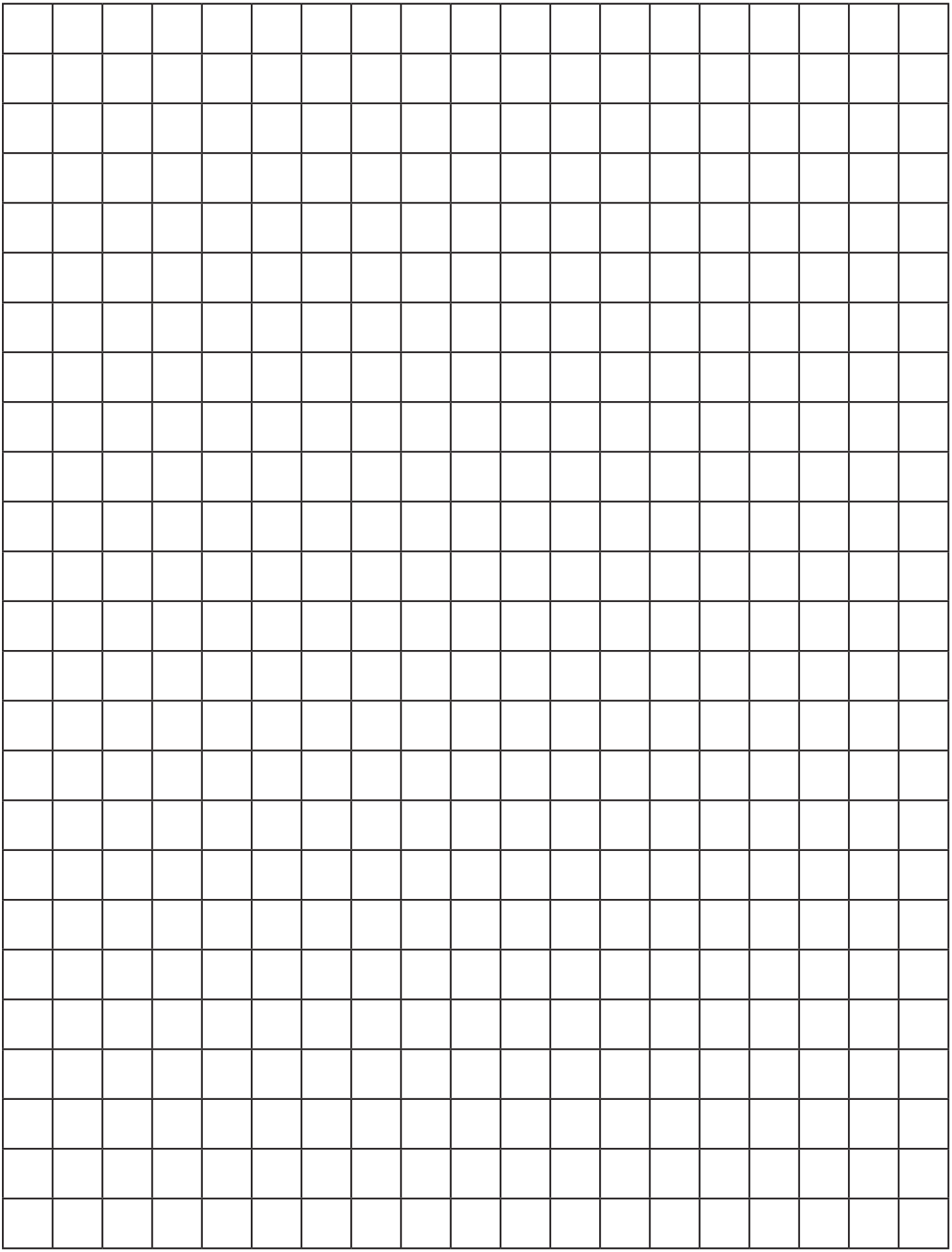
Round	Length	Width	Perimeter
1			
2			
3			
4			
		Total Score	

PLAYER 2

Round	Length	Width	Perimeter
1			
2			
3			
4			
		Total Score	

PLAYER 1

PLAYER 2



Raging Rectangles

Building Fluency: area and perimeter

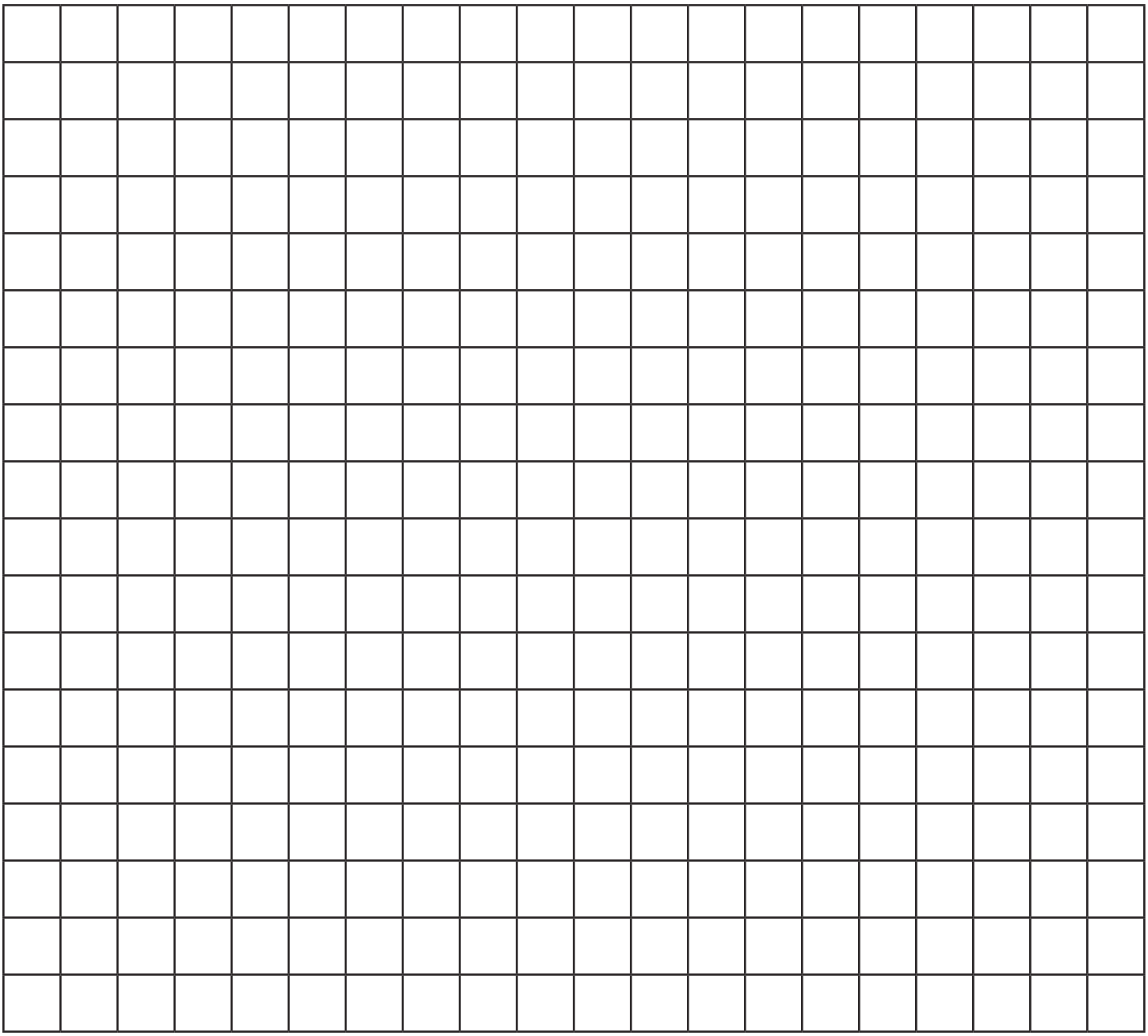
Materials: a pair of dice, gameboard, and crayons or colored pencils

Number of Players: 2

Directions:

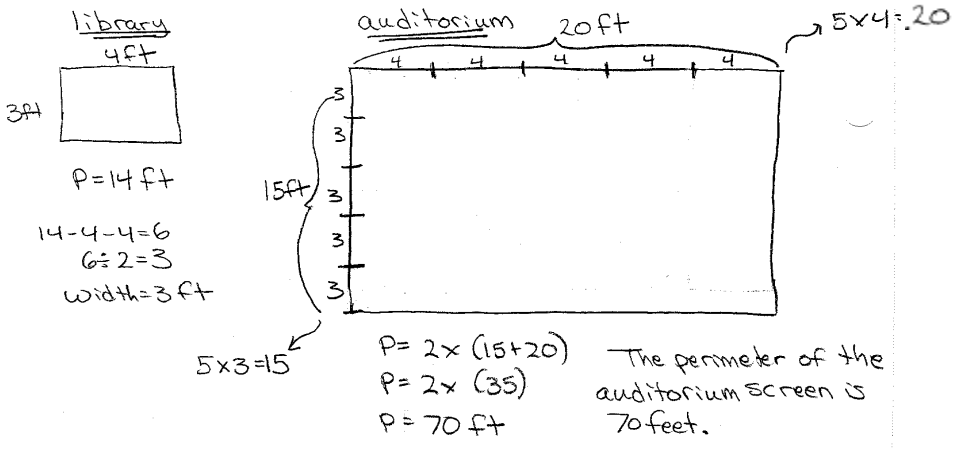
1. In turn each player rolls the dices. A player outlines and colors a rectangle on the gameboard to match the dice. Example: a roll of 6 and 3 = a 6 x 3 rectangle or a 3 x 6 rectangle
2. Player writes an equation to represent total number of squares (area) in the center of the rectangle.
3. A player loses a turn when he rolls and cannot fit his rectangle on the gameboard. Game is over when neither player can draw a rectangle. Winner is the player with the most squares colored on the gameboard.

Variation/Extension: Teacher can change the dimensions of the gameboard or let each player have their own gameboard. They could also find the total area of their gameboard. Player with largest area wins.



Problem 1

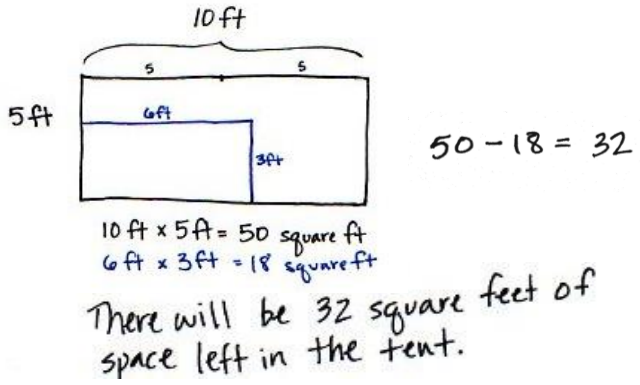
The rectangular projection screen in the school auditorium is 5 times as long and 5 times as wide as the rectangular screen in the library. The screen in the library is 4 feet long with a perimeter of 14 feet. What is the perimeter of the screen in the auditorium?



The structure of this problem and what it demands of students is similar to that found within the first and second lessons of this module. Elicit from students why both the length and the width were multiplied by 5 to find the dimensions of the larger screen. Students use the dimensions to find the perimeter of the larger screen. Look for students to use formulas for perimeter other than $2 \times (l + w)$ for this problem, such as the formula $2l + 2w$.

Problem 2

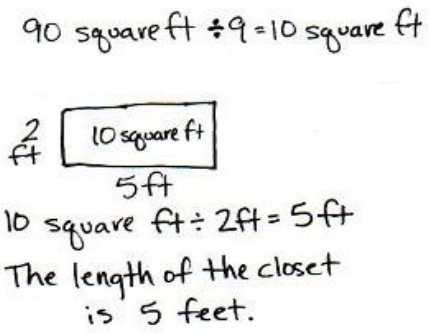
The width of David's rectangular tent is 5 feet. The length is twice the width. David's rectangular air mattress measures 3 feet by 6 feet. If David puts the air mattress in the tent, how many square feet of floor space will be available for the rest of his things?



The new complexity here is that students are finding an area within an area and determining the difference between the two. Have students draw and label the larger area first and then draw and label the area of the air mattress inside as shown above. Elicit from students how the remaining area can be found using subtraction.

Problem 3

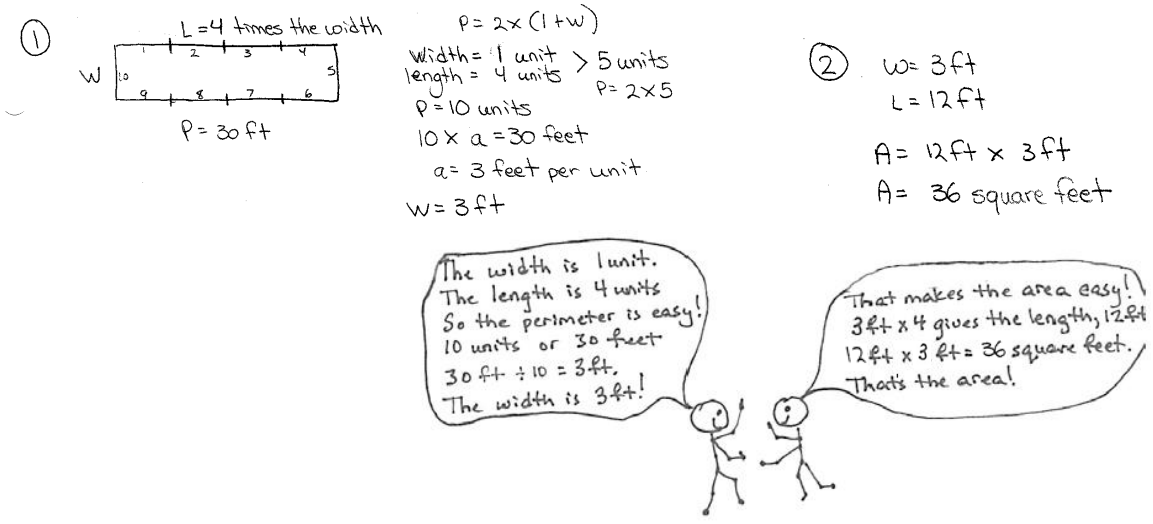
Jackson's rectangular bedroom has an area of 90 square feet. The area of his bedroom is 9 times that of his rectangular closet. If the closet is 2 feet wide, what is its length?



This multi-step problem requires students to work backwards, taking the area of Jackson's room and dividing by 9 to find the area of his closet. Students use their learning from the first and second lessons of this module to help solve this problem.

Problem 4

The length of a rectangular deck is 4 times its width. If the deck's perimeter is 30 feet, what is the deck's area?



Students need to use what they know about multiplicative comparison and perimeter to find the dimensions of the deck. Students find this rectangle has 10 equal-size lengths around its perimeter. Teachers can support students who are struggling by using square tiles to model the rectangular deck. Emphasize finding the number of units around the perimeter of the rectangle. Once the width is determined, students are able to solve for the area of the deck. If students have solved using square tiles, encourage them to follow up by drawing a picture of the square tile representation. This allows students to bridge the gap between the concrete and pictorial stages.

Problem Set

Please note that the Problem Set for Lesson 3 comprises this lesson's problems, as stated in the introduction of the lesson.

Student Debrief (10 minutes)

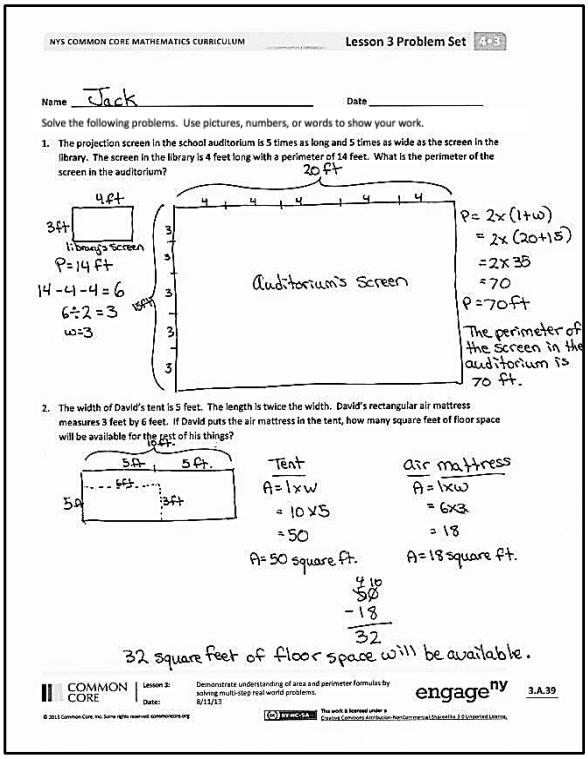
Lesson Objective: Demonstrate understanding of area and perimeter formulas by solving multi-step real-world problems.

The Student Debrief is intended to invite reflection and active processing of the total lesson experience.

Invite students to review their solutions for the Problem Set. They should check work by comparing answers with a partner before going over answers as a class. Look for misconceptions or misunderstandings that can be addressed in the Debrief. Guide students in a conversation to debrief the Problem Set and process the lesson.

Any combination of the questions below may be used to lead the discussion.

- What simplifying strategies did you use to multiply to find the perimeter in Problem 1?
- Can David fit another air mattress of the same size in his tent? (Guide students to see that while there is sufficient area remaining, the dimensions of the air mattress and remaining area of the tent would prevent it from fitting.)
- How was solving Problem 3 different from other problems we have solved using multiplicative comparison?
- Explain how you used the figure you drew for Problem 4 to find a solution.
- When do we use *twice as much*, *2 times as many,* or *3 times as many?* When have you heard that language being used?


NYS COMMON CORE MATHEMATICS CURRICULUM Lesson 3 Problem Set 4•3

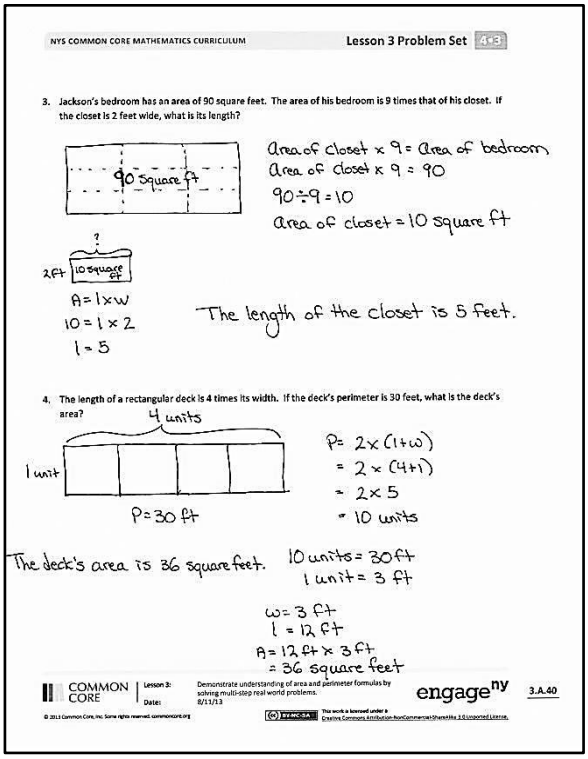
Name Jack Date

Solve the following problems. Use pictures, numbers, or words to show your work.

1. The projection screen in the school auditorium is 5 times as long and 5 times as wide as the screen in the library. The screen in the library is 4 feet long with a perimeter of 14 feet. What is the perimeter of the screen in the auditorium?

2. The width of David's tent is 5 feet. The length is twice the width. David's rectangular air mattress measures 3 feet by 6 feet. If David puts the air mattress in the tent, how many square feet of floor space will be available for the rest of his things?

COMMON CORE Lesson 3: Date: Demonstrate understanding of area and perimeter formulas by solving multi-step real world problems. 8/11/13 engage^ny 3.A.39


NYS COMMON CORE MATHEMATICS CURRICULUM Lesson 3 Problem Set 4•3

3. Jackson's bedroom has an area of 90 square feet. The area of his bedroom is 9 times that of his closet. If the closet is 2 feet wide, what is its length?

4. The length of a rectangular deck is 4 times its width. If the deck's perimeter is 30 feet, what is the deck's area?

COMMON CORE Lesson 3: Date: Demonstrate understanding of area and perimeter formulas by solving multi-step real world problems. 8/11/13 engage^ny 3.A.40

4.OA, MD Karl's Garden

Alignments to Content Standards: 4.MD.A.3 4.OA.A.3

Task

Karl's rectangular vegetable garden is 20 feet by 45 feet, and Makenna's is 25 feet by 40 feet. Whose garden is larger in area?

IM Commentary

The purpose of the task is for students to solve a multi-step multiplication problem in a context that involves area. In addition, the numbers were chosen to determine if students have a common misconception related to multiplication. Since addition is both commutative and associative, we can reorder or regroup addends any way we like. So for example,

$$\begin{aligned} 20 + 45 &= 20 + (5 + 40) \\ &= (20 + 5) + 40 \\ &= 25 + 40 \end{aligned}$$

Sometimes students are tempted to do something similar when multiplication is also involved; however this will get them into trouble since

$$20 \times (5 + 40) \neq (20 + 5) \times 40$$

This task was adapted from problem #20 on the 2011 American Mathematics Competition (AMC) 8 Test. Observers might be surprised that a task that was historically considered to be appropriate for middle school aligns to an elementary standard in the Common Core. In fact, if the factors were smaller (since in third grade students are limited to multiplication with 100; see 3.OA.3), this task would be appropriate for third

grade: "3.MD.7.b Multiply side lengths to find areas of rectangles with whole-number side lengths in the context of solving real world and mathematical problems, and represent whole-number products as rectangular areas in mathematical reasoning." For example, we could use a 5 ft by 12 ft garden, and a 7 ft by 10 ft garden to make this appropriate for a (challenging) third grade task. This earlier introduction to the connection between multiplication and area brings states who have adopted the Common Core in line with other high-achieving countries. The responses to the multiple choice answers for the original problem had the following distribution:

Choice	Answer	Percentage of Answers
(A)	Karl's garden is larger by 100 square feet.	5.43
(B)	Karl's garden is larger by 25 square feet.	1.99
(C)	The gardens are the same size.	12.75
(D)	Makenna's garden is larger by 25 square feet	2.86
(E)*	Makenna's garden is larger by 100 square feet.	76.59
Omit	--	0.37

Of the 153,485 students who participated, 72,648 or 47% were in 8th grade, 50,433 or 33% were in 7th grade, and the remainder were less than 7th grade. As the Common Core gets implemented, we will have an opportunity to compare how the generation of students who have had instructional opportunities shaped by the Common Core do on such tasks.

Solutions

Edit this solution

Solution: 1

We multiply the length and the width to find the area of each rectangular garden. Since

$$20 \times 45 = 900$$

we have that Karl's garden is 900 square feet.

We also know that

$$25 \times 40 = 1,000$$

so Makenna's garden is 1,000 square feet.

Finally, we can find the difference of the two areas

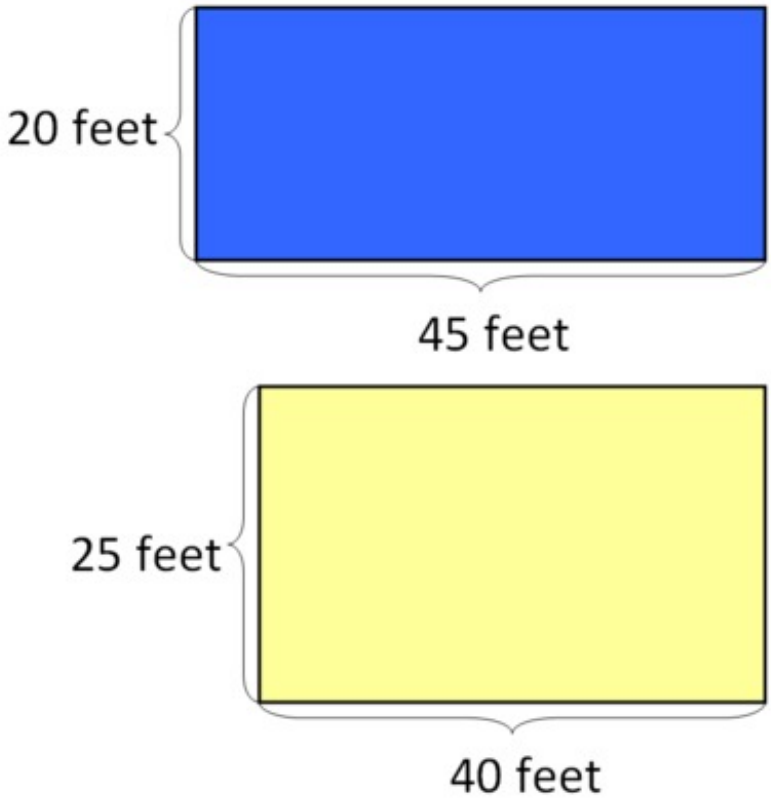
$$1,000 - 900 = 100$$

and we see that Makenna's garden is larger by 100 square feet.

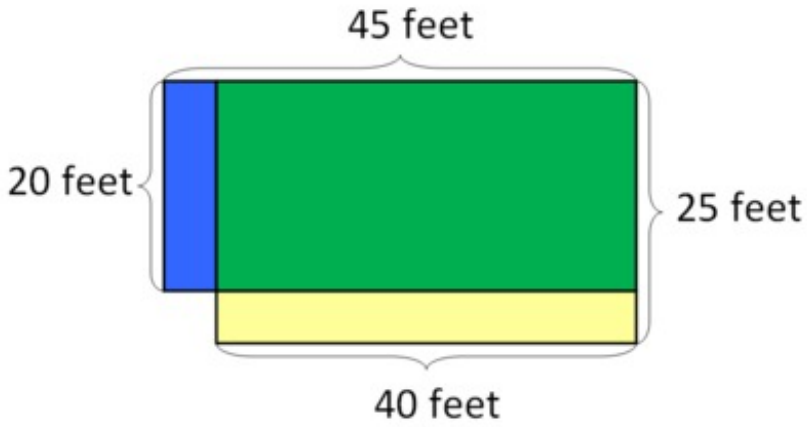
Edit this solution

Solution: With pictures

If we draw pictures to scale, we can see this difference visually. First, draw the two rectangles to represent the two gardens; the blue rectangle represents Karl's garden and the yellow rectangle represents Makenna's garden:



Now, draw them overlapping. In the picture below, the green region shows where the rectangles overlap, the blue strip on the left shows the part of the blue rectangle that is not overlapped by the yellow rectangle, and the yellow strip on the bottom shows the part of the yellow rectangle that is not overlapped by the blue rectangle:



Note that the blue strip is 20 feet by 5 feet and has an area of 100 square feet. The yellow strip is 40 feet by 5 feet and has an area of 200 square feet. Since

$$200 - 100 = 100$$

we have that Makenna's garden is 100 square feet larger than Karl's garden.

If students happen to display the misconception mentioned in the commentary, then these pictures could be used to help them understand why the areas are not equal.

Raging Rectangles

Building Fluency: area and perimeter

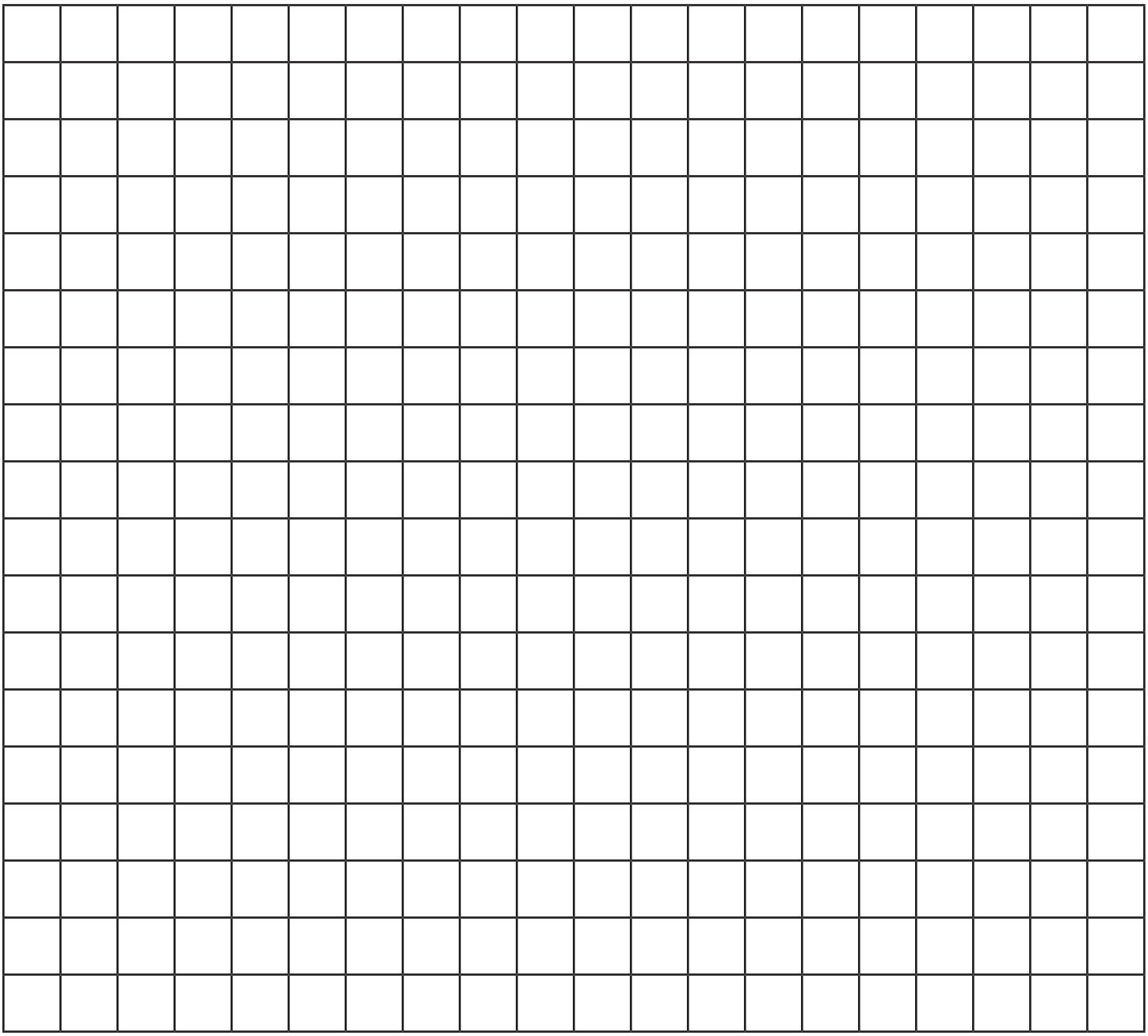
Materials: a pair of dice, gameboard, and crayons or colored pencils

Number of Players: 2

Directions:

1. In turn each player rolls the dices. A player outlines and colors a rectangle on the gameboard to match the dice. Example: a roll of 6 and 3 = a 6 x 3 rectangle or a 3 x 6 rectangle
2. Player writes an equation to represent total number of squares (area) in the center of the rectangle.
3. A player loses a turn when he rolls and cannot fit his rectangle on the gameboard. Game is over when neither player can draw a rectangle. Winner is the player with the most squares colored on the gameboard.

Variation/Extension: Teacher can change the dimensions of the gameboard or let each player have their own gameboard. They could also find the total area of their gameboard. Player with largest area wins.



Science
Grade 4

Overview

- Your child will engage in activities to help them learn about sight and light
    - Each lesson will begin with discussion questions to get students thinking about what they already know.
    - There will be activities that require students to observe, read, notice, question and develop models
    - Videos and articles are provided to help students use the science and engineering practices with a particular focus on developing and using models to understand abstract science ideas
- Your child can talk about what they are learning, use drawings and write down answers. Because these lessons build on each other, it is important that your child writes or draws in their notebook as well as communicate their ideas verbally.
- Your child should have a notebook for science assignments
- Review the assignment materials and assignment bundle in advance
- Review each assignment with your child before they begin. Allow them to ask for help if and when needed
- Below are suggestions to support your child's learning based on the assignments

Assignment #1

A. Possible 5 objects to select - pencil, book, toy, hat, container. Your child should be able to pick up each of the objects. Bedroom is likely the best place to select objects.
    a. What did you use to see the objects? Eyes, glasses. The correct answer is light and your child will discover this answer as they complete these lessons.
B. If there are windows in the room and the light can be blocked, please do so. Close the bedroom door also.
    a. Your child should note that it is hard or harder to see the objects listed when the lights are out or when there is less light in the room. It is harder to see the objects because there is less light
C. Find a table or desk lamp to use for this activity.
    a. You can see light because it goes everywhere
    b. You should not be able to see the light source because the book blocks the light traveling to your eyes. This supports the idea that you need light to see objects
D. For the Sight model - the following items should be included - a light source (lamp or overhead light in the room), at least one of the object(s) that were listed, an eye to see the objects, a way to show that the light comes from everywhere. Your explanation

should say that light from the light bulb in your room enters your eye so you can see objects.

Assignment #2

A. Encourage your child to underline words that are unfamiliar, ideas they find interesting and ideas that relate to the activities they did in Assignment #1.
    a. Two types of light - sun, stars, lightning, fire; Two types of light sources - bulbs, flashlights
    b. How do we see light - light bounces off objects and enters our eyes
    c. Objects that block light - solid objects such as books, forks, spoons, your body, shoes, stuffed animal, trees. Objects that allow light to pass through - windows, glasses, water, clear plastic, air
B. Watch the video

NOTICE (what did you see?)	WONDER (what questions do you have?)
Light travels in straight lines When light hits the mirror it changes directions The light that returns from the mirror comes back in a straight line	Why does the light return at an angle? Why does light travel in a straight line? Can I reproduce this activity at my house?

C. Revise your Sight model using information from the Article and Video
    a. Add that light travels in a straight line - use rays →to represent this, when light hits a solid object (use object that you selected in assignment #1) it travels back in a straight line to your eye so that it can be seen. Revise or add information to the explanation - such as how light travels in a straight line until it reaches an object and it changes directions (reflects)

Assignment #3

A. Review Sight model - how has your understanding of how light travels to the eye changed? Some misconceptions might be realized - light is what helps us to see, without the light entering the eye, objects can't be seen. Did not know that light traveled in a straight line. Did not know light could change direction (reflect). Thought that objects absorb light.
B. Your child can go outside if it is sunny to see his/her shadow or the shadow of a tree. Provide your child with a flashlight and some small objects to make shadows. Encourage your child to use a notice and wonder chart to record their ideas when completing this activity.

NOTICE (what did you see?)	WONDER (what questions do you have?)
I needed sunlight to use my body to make shadows. As I moved, the size and position of the shadow changed As I moved the flashlight away from the object, the size and position of the shadow changed I need light from the flashlight to make a shadow of the object	What causes the size of the shadow to change? Why can't I see my shadow or the shadow of a tree when it is cloudy or raining?

Extension Activity

C. Revise your Sight model by adding one of the objects that blocked light and expanding your explanation. Add the object that forms the shadow, add the light source (sun, flashlight) and show how the light hits the object to make the shadow we see. To complete the model, your child can use other resources. You can help her/him do a google search about shadows, how shadows are made or light and shadows.