

Student Guide

**Measuring Area (SG pp. 99–100)
Questions 1–6**

1. 20 square tiles
- 2.* Prof. Peabody numbered two tiles with the same number to show that two halves together cover one whole.
- 3.* 64 square tiles
4. 84 square tiles: $64 + 20 = 84$
5. A. 11 square centimeters
B.* about 11 square centimeters
6. A. 10 whole square centimeters
B. Yes
C. 15 square centimeters

Measuring Area

What is Area?

Area is a measurement of size. We measure the area of a floor to find the amount of carpet needed to cover the floor. We can also use area to measure the amount of paper needed to wrap a present.

Area is the amount of surface that is needed to cover something. To measure the area of a shape, we tell the number of squares needed to cover the shape.

Professor Peabody has started to cover his living room and hall with square tiles. The living room is in the shape of an octagon. The hall is a rectangle.

✓ **Check-In: Questions 1-6**

1. How many square floor tiles did Professor Peabody use to cover the hall?
2. Professor Peabody has covered half of his living room with tiles. These tiles have been counted for you. Why are the numbers 31 and 32 used twice?
3. How many square floor tiles will it take to cover the whole living room?
4. How many square floor tiles will Professor Peabody need to cover the hall and living room?

Copyright © Kendall Hunt Publishing Company

Measuring Area **SG • Grade 3 • Unit 5 • Lesson 2** **99**

Student Guide - Page 99

A **square centimeter** is the area of a square that is 1 centimeter long on each side. This is 1 square centimeter.

5. Find the area in square centimeters of these two shapes.

A.

B.

6. This shape has curved sides. Professor Peabody estimated its area. He counted whole square centimeters and matched smaller pieces with one another to estimate whole squares.

- A. How many whole squares did he count?
- B. Find the two pieces he "put together" to make square number 15. Do you agree they make about a whole square centimeter?
- C. What is Professor Peabody's estimate for the area?

Copyright © Kendall Hunt Publishing Company

Use the *Check Each Other* page in the *Student Activity Book* to practice finding the area of shapes with curved sides.

100 **SG • Grade 3 • Unit 5 • Lesson 2** **Measuring Area**

Copyright © Kendall Hunt Publishing Company

Student Guide - Page 100

*Answers and/or discussion are included in the lesson.

Student Activity Book

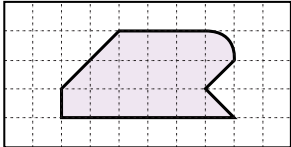
Check Each Other (SAB p. 147)
Questions 1–2

1. Area is approximately 15 sq cm.
2. **A.*** Possible response: I do not agree with either Luis or Grace. Both Luis and Grace made counting errors.
 - B.*** Possible response: Luis counted half square centimeters as wholes, so his count is too high. He should match up the half pieces to count them as whole pieces.
 - C.*** Grace counted two square centimeters twice (numbered with 14), so her count is too low. She matched up one set of half pieces but should count the piece that is almost one whole as the 15th piece rather than the 14th.

Name _____ Date _____

Check Each Other

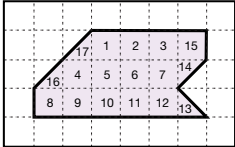
1. Find the area in square centimeters. □ 1 square centimeter



Area _____

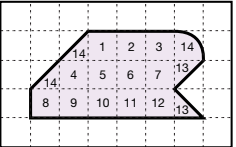
2. Luis and Grace each found the area of the shape in Question 1. Look at their work.

Luis's Work



The area is about 17 square centimeters.

Grace's Work



The area is about 14 square centimeters.

A. Do you agree with these students? Why or why not?
B. How can Luis improve his work?
C. How can Grace improve her work?

Copyright © Kendall Hunt Publishing Company

Measuring Area SAB • Grade 3 • Unit 5 • Lesson 2 147

Student Activity Book - Page 147

Area of Five Shapes (SAB p. 149)
Shapes A–E

- A. $33\frac{1}{2}$ sq cm
- B. about 14 sq cm
- C. about 17 sq cm or $17\frac{1}{4}$ sq cm
- D. about $31\frac{1}{2}$ sq cm
- E. 17–19 sq cm


Teacher Guide

Putting Pieces Together (TG pp. 1–2)
Responses will vary.

Make Your Own Shape (TG pp. 1–2)
Shapes and area will vary.

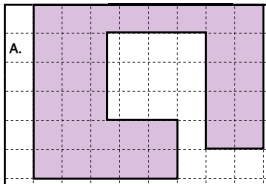
Name _____ Date _____

Area of Five Shapes

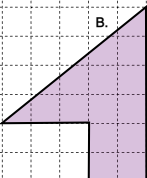


Find the area of each of the shapes on the grid below.

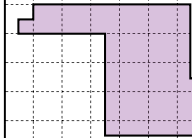
A.



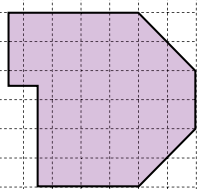
B.



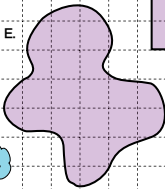
C.



D.



E.



□ 1 square centimeter

Copyright © Kendall Hunt Publishing Company

Measuring Area SAB • Grade 3 • Unit 5 • Lesson 2 149

Student Activity Book - Page 149

*Answers and/or discussion are included in the lesson.