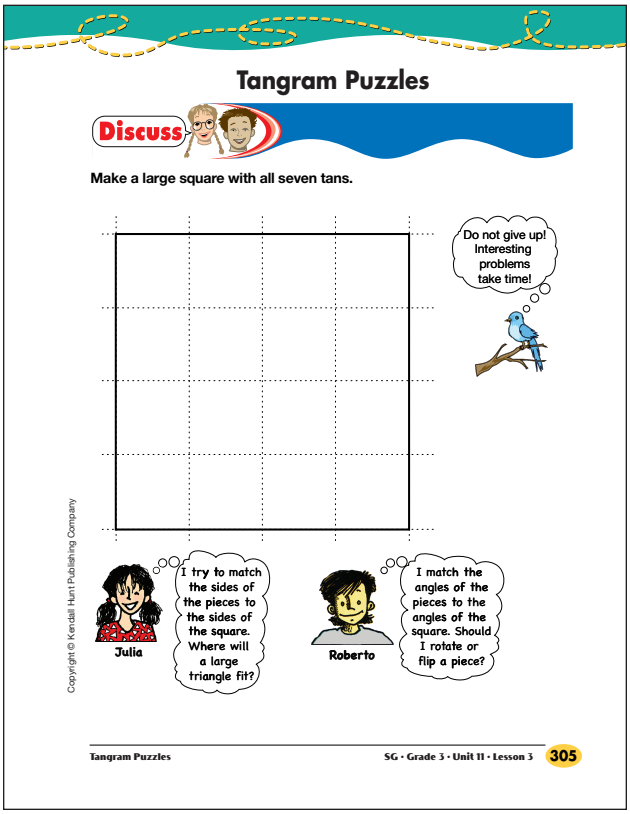
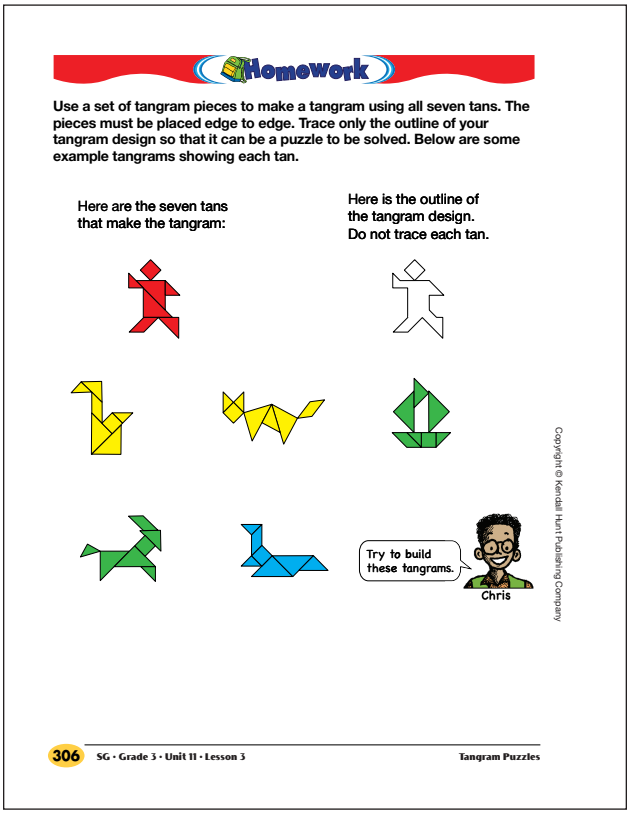


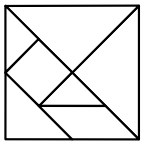
Student Guide - Page 305



Student Guide - Page 306

Student Guide

Tangram Puzzles (SG p. 305)



There is one solution. The square can be rotated and flipped into 8 configurations.

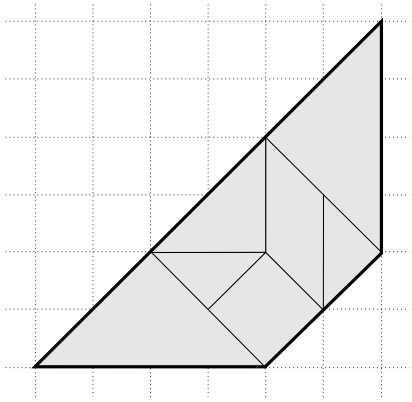
Homework (SG p. 306)

Students' tangrams will vary.

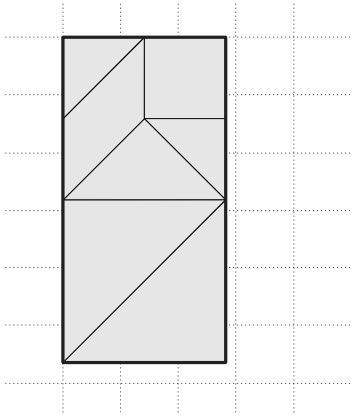
Student Activity Book

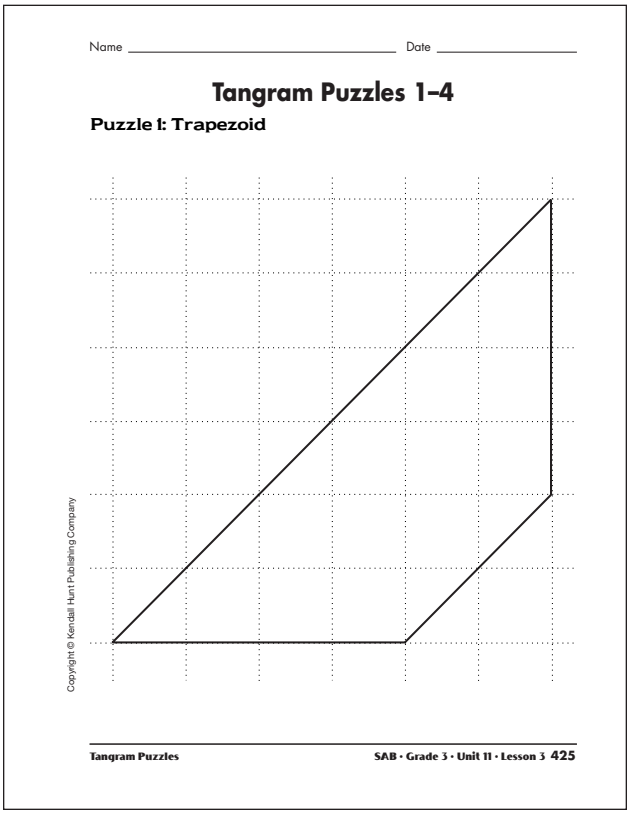
Tangram Puzzles 1–4 (SAB pp. 425–428)

Puzzle 1: Trapezoid



Puzzle 2: Rectangle

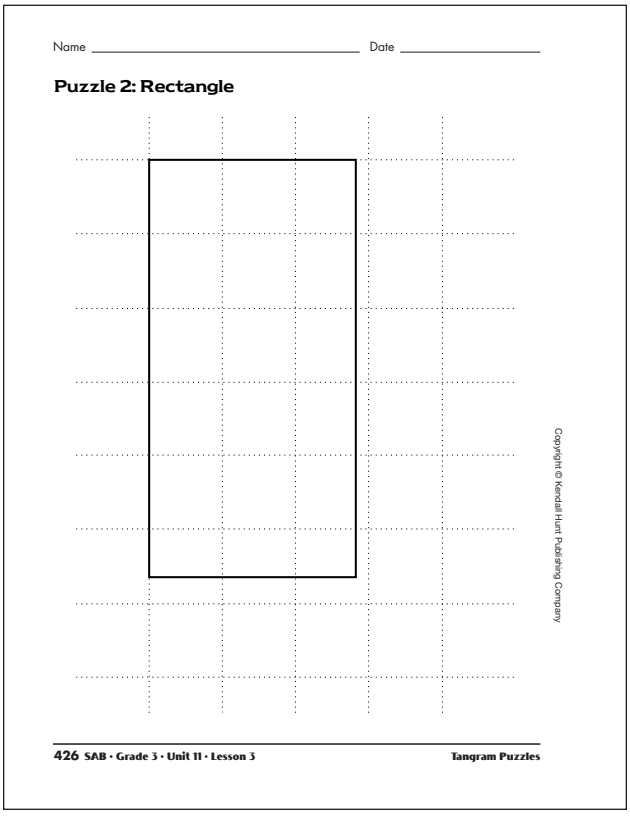



Name _____ Date _____

Tangram Puzzles 1–4

Puzzle 1: Trapezoid

***Student Activity Book* - Page 425**

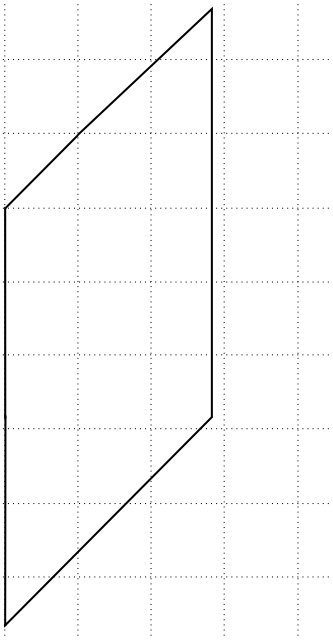

Name _____ Date _____

Puzzle 2: Rectangle

***Student Activity Book* - Page 426**

Name _____ Date _____

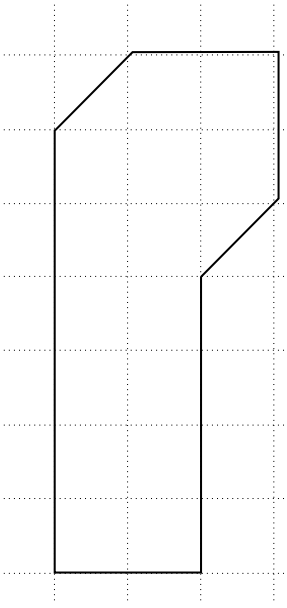
Puzzle 3: Parallelogram



***Student Activity Book* - Page 427**

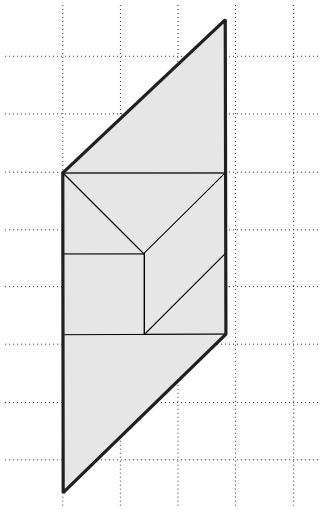
Name _____ Date _____

Puzzle 4: _____
Name the Puzzle

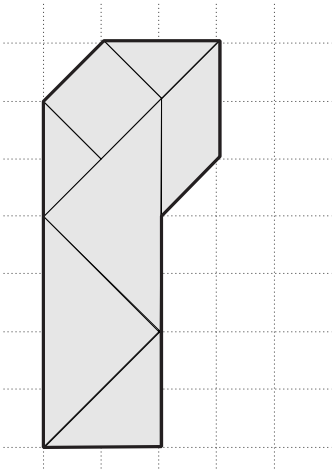


***Student Activity Book* - Page 428**

Puzzle 3: Parallelogram



Puzzle 4

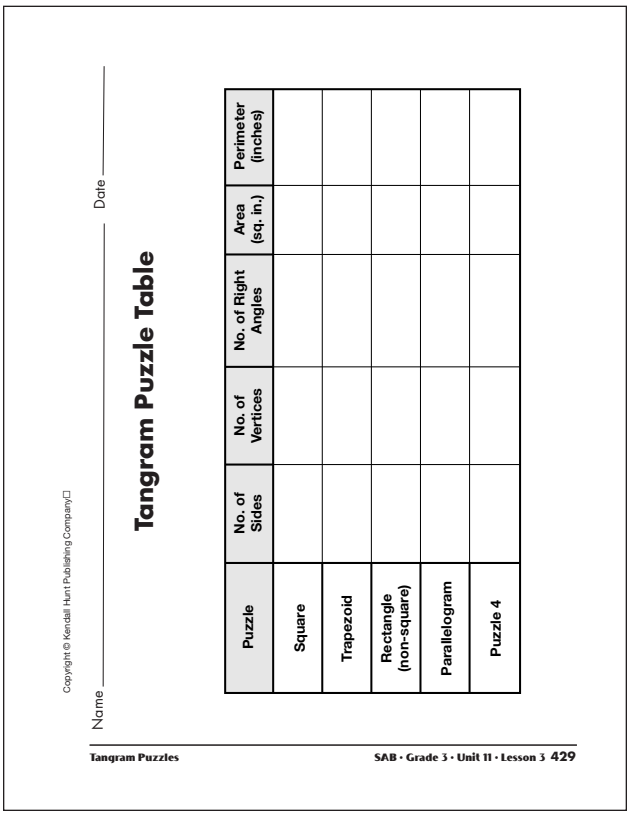


Student Activity Book

Tangram Puzzle Table* (SAB p. 429)

Tangram Puzzle Table

Puzzle	No. of Sides	No. of Vertices	No. of Right Angles	Area (sq. in.)	Perimeter (inches)
Square	4	4	4	16	16
Trapezoid	4	4	0	16	$19\frac{1}{2}$
Rectangle (non-square)	4	4	4	16	17
Parallelogram	4	4	0	16	19
Puzzle 4	7	7	3	16	19


Name _____ Date _____

Tangram Puzzle Table

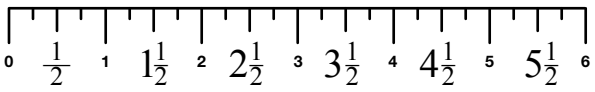
Puzzle	No. of Sides	No. of Vertices	No. of Right Angles	Area (sq. in.)	Perimeter (inches)
Square					
Trapezoid					
Rectangle (non-square)					
Parallelogram					
Puzzle 4					

Tangram Puzzles SAB • Grade 3 • Unit 11 • Lesson 3 429

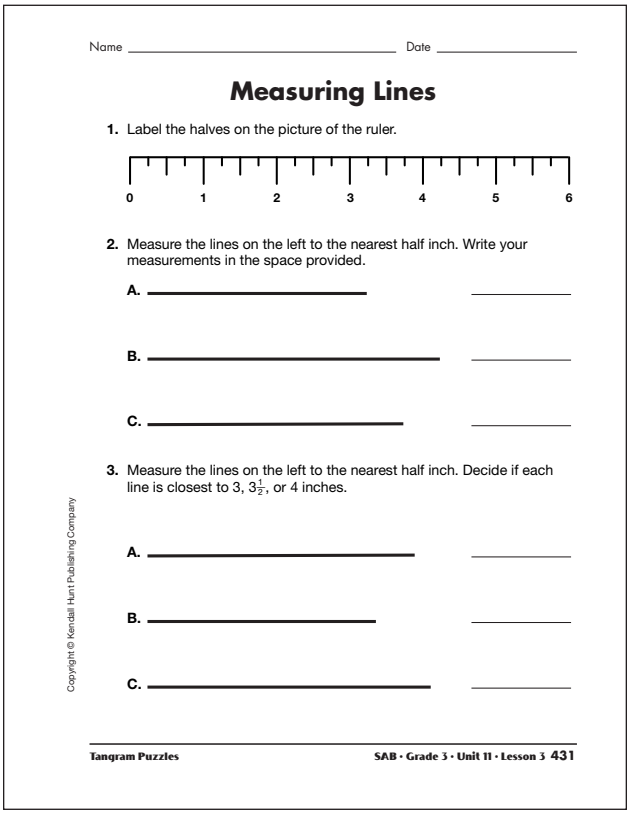
***Student Activity Book* - Page 429**

Measuring Lines (SAB p. 431) Questions 1–3

1.



2. **A.** 3 inches
   B. 4 inches
   C. $3\frac{1}{2}$ inches
3. **A.** $3\frac{1}{2}$ inches
   B. 3 inches
   C. 4 inches


Name _____ Date _____

Measuring Lines

1. Label the halves on the picture of the ruler.

2. Measure the lines on the left to the nearest half inch. Write your measurements in the space provided.

A. _____ _____

B. _____ _____

C. _____ _____

3. Measure the lines on the left to the nearest half inch. Decide if each line is closest to 3, $3\frac{1}{2}$, or 4 inches.

A. _____ _____

B. _____ _____

C. _____ _____

Tangram Puzzles SAB • Grade 3 • Unit 11 • Lesson 3 431

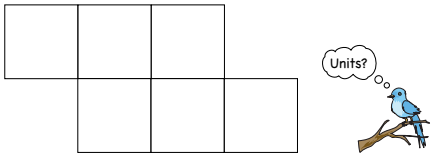
***Student Activity Book* - Page 431**

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

Name _____ Date _____

Shapes with Six Tiles

1. The shape below is made from 6 square tiles.



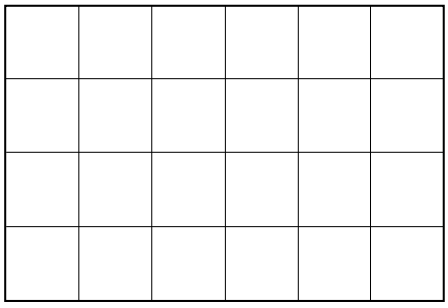
A. Show or tell how to find the perimeter.

B. Show or tell how to find the area.

***Teacher Guide* - Page 1**

Name _____ Date _____

2. A. Using six square tiles, make a shape that has a different perimeter than the shape in Question 1. Trace the shape on the grid.



B. Show or tell how to find the perimeter.

C. Show or tell how to find the area.

***Teacher Guide* - Page 2**

Teacher Guide

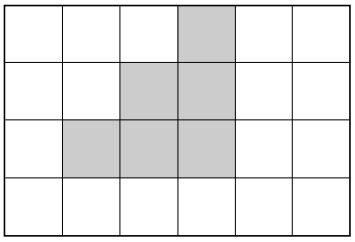
Shapes with Six Tiles (TG pp. 1–4)
Questions 1–5

1. A. 12 inches; Methods for finding perimeter will vary. Possible response: I counted all the edges around the shape.

B. 6 square inches; Methods for finding area will vary. Possible response: I counted each square. Every tile is one square inch, so the area is 6 square inches.

Shapes will vary for Questions 2–3. One sample shape is given in Question 2A:

2. A. Sample shape:



B. Perimeter will vary based on shape. Sample shape's perimeter:12 inches; Methods for finding perimeter will vary. Possible response: I measured the outline of the shape and added the inches.

C. 6 square inches; Explanations will vary.

3. A. Shapes will vary.

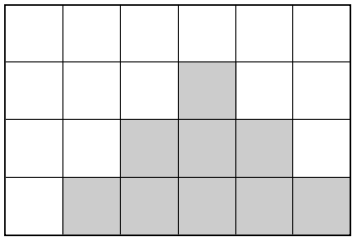
B. Perimeter will vary based on shape.

C. 6 square inches; Explanations will vary.

4. A. The three shapes have the same area, 6 square inches.

B. Yes, different shapes can have the same area but different perimeters. For example, the shape in Question 1 has an area of 6 square inches and a perimeter of 12 inches. I used the same 6 tiles to make a shape with 6 square inches, but it had a different perimeter.

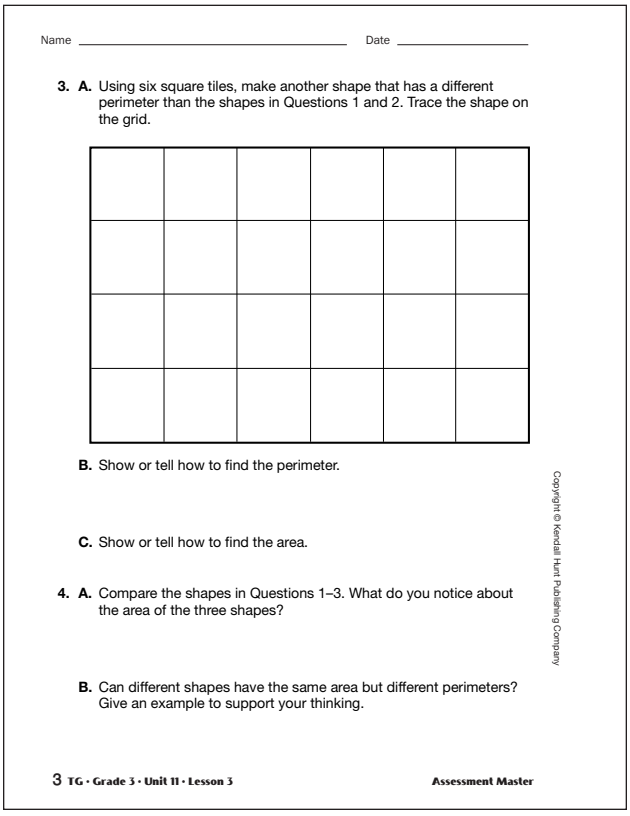
5. A. Shapes will vary. Sample shape:



B. Based on shape in Question 5A.

My Tile Shape

No. of Sides	No. of Vertices	Area (sq. in.)	Perimeter (inches)
12	12	9	16



Name _____ Date _____

3. A. Using six square tiles, make another shape that has a different perimeter than the shapes in Questions 1 and 2. Trace the shape on the grid.

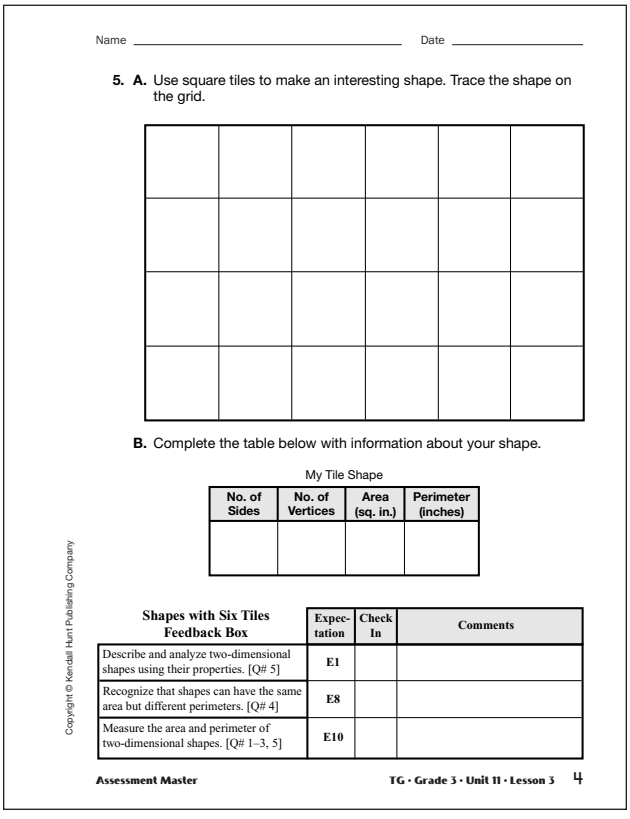
B. Show or tell how to find the perimeter.

C. Show or tell how to find the area.

4. A. Compare the shapes in Questions 1–3. What do you notice about the area of the three shapes?

B. Can different shapes have the same area but different perimeters? Give an example to support your thinking.

***Teacher Guide* - Page 3**



Name _____ Date _____

5. A. Use square tiles to make an interesting shape. Trace the shape on the grid.

B. Complete the table below with information about your shape.

My Tile Shape

No. of Sides	No. of Vertices	Area (sq. in.)	Perimeter (inches)

Shapes with Six Tiles Feedback Box	Expectation	Check In	Comments
Describe and analyze two-dimensional shapes using their properties. [Q# 5]	E1		
Recognize that shapes can have the same area but different perimeters. [Q# 4]	E8		
Measure the area and perimeter of two-dimensional shapes. [Q# 1–3, 5]	E10		

***Teacher Guide* - Page 4**