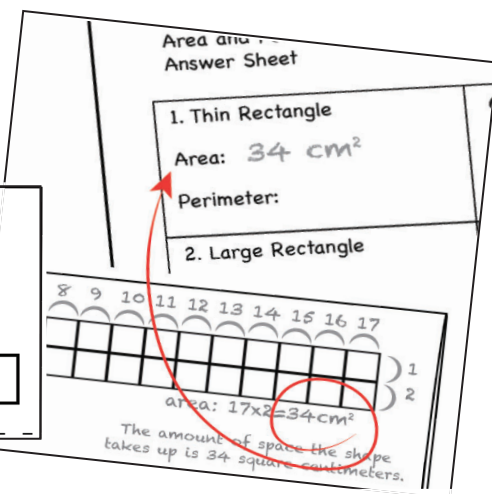
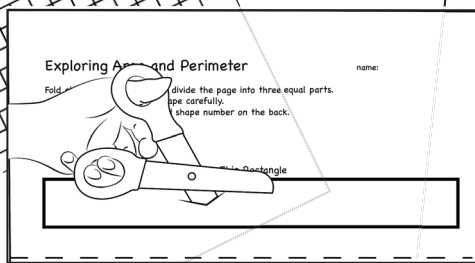
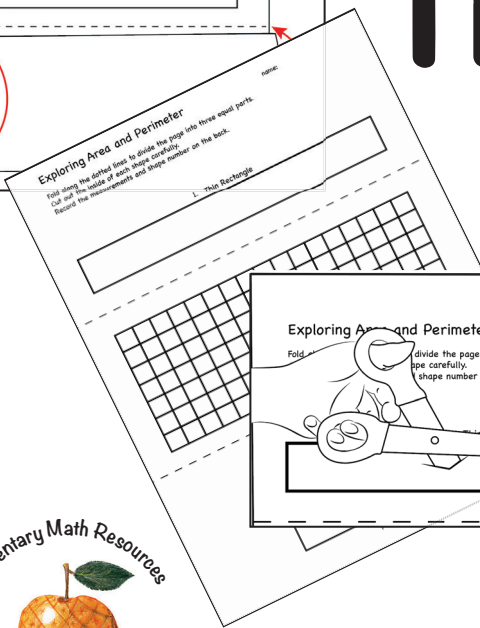
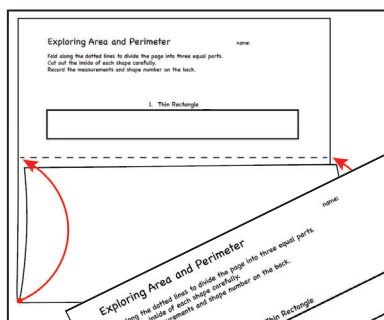
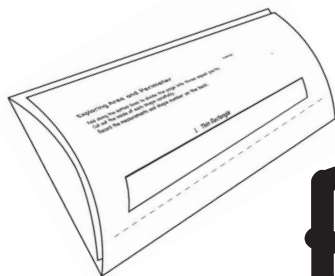


# Area and Perimeter Trifold



Isabelle Hoag M. Ed.  
Director of Education  
UnCommon-Core.com

Hello Teachers,

Thank you for downloading this handout. After decades of teaching, now I'm sharing activities I designed for my classes and some new ones as well.

Please visit [UnCommon-Core.com](http://UnCommon-Core.com). While you are there, sign up for your free copy of **Colorful Collections: A Mindful Exploration of Proper Fractions**.

In addition to **Colorful Collections**, you will receive a Wednesday morning email with teacher tips, educational ideas, or a free version of whatever I'm working on at the moment. You get to use it for free, and I benefit from your questions and comments.

Also, visit my Teachers Pay Teachers store [Uncommon-Core dot com](http://Uncommon-Core dot com).

Thank you again. All the best,

Isabelle

Isabelle Hoag M.Ed.  
Director of Education  
[UnCommon-Core.com](http://UnCommon-Core.com)



# Teacher Tips

As soon as your students can find the perimeter and the area of shapes, introduce this hands on **Area and Perimeter Trifold** activity to them. This activity has 20 shapes on six different pages. Starting with simple rectangles and squares, then moving on to triangles and composite shapes, these six pages will give your students plenty of mindful practice finding area and perimeter.

Each student will need scissors, pencil, eraser, answer sheet, and a pocket folder in which to keep their work. Make sure to have recycling boxes ready and available for the paper scraps.

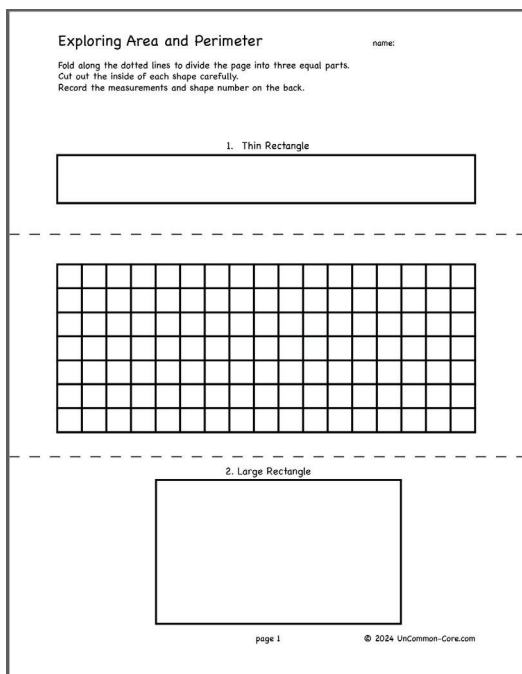
## Printing

These pages are tricky to print. The back looks as if it is upside down, however once the paper is folded, it will be right side up. Print out a couple test pages to experiment with before you print enough for your entire class.

Another printing issue is the actual size of the shapes and the grid. When printed actual size, the measurements are close to centimeters. Students may be able to use a centimeter ruler. Still, depending on your printer and printing options, the images might not be exactly equal to centimeters. Regardless of that, the images are consistent so the grid and other measures will work.

## Introducing the pages

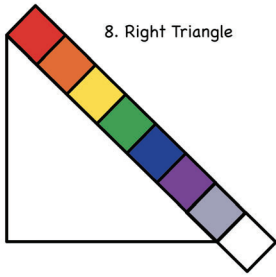
Have students complete one page during each class time, after direct instruction or discussion. It is important for students to work through the pages in order: concepts in later pages build upon those introduced earlier.



Before each lesson, collect students' comments, or questions about area and perimeter. When activities in later lessons touch on their comments, or questions, bring your students' attention to the connection. You might use a poster to track these conversations over the course of the unit.

**Page 1.** Introduce the Fold, Cut, Measure, Record process that they will use on all pages. Explain that precise folding and cutting will make measuring easier.

**Page 2.** Review the Fold, Cut, Measure, Record process. Take note of students who are unable to complete page 2 independently; you might group them together so they can receive direct support during upcoming lessons.

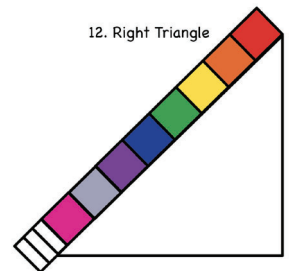


**Page 3.** Page 2 had a 4 x 4 square in which the area and perimeter were the same number even though the units differed. Ask students if they expect this to be a property of all squares or not. Invite them to consider the question as they measure the squares on page 3. Show your students how to use the diagonal grid near Right Triangle #8 to measure the perimeter of the right triangle. Have them color or number the centimeter squares to help them measure.

**Page 4.** Students will have another chance to practice finding the area and perimeter of a triangle. In this case, the length of the hypotenuse is not a whole number. The square centimeter

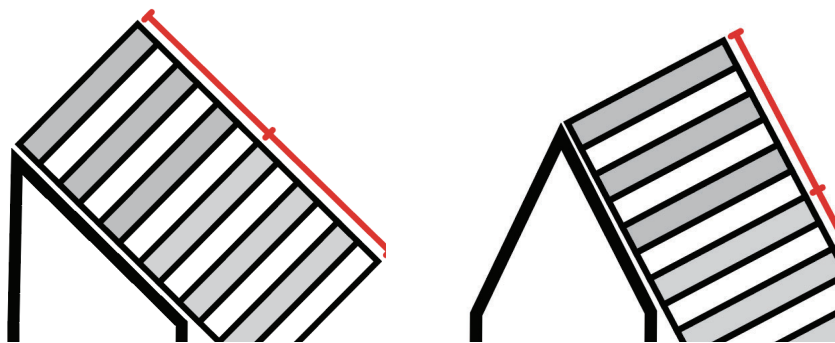
at the end has been divided into thirds, showing the length to be eight and one-third centimeters long.

**Page 5.** There are four composite shapes on page five. Students may need extra time to complete it. Show students that there are different ways to identify regular shapes that make up the composite shape. Invite them to find the least number of regular shapes possible.



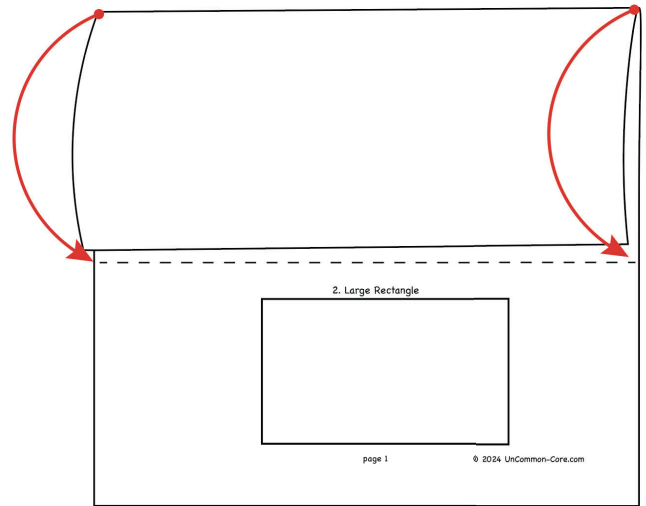
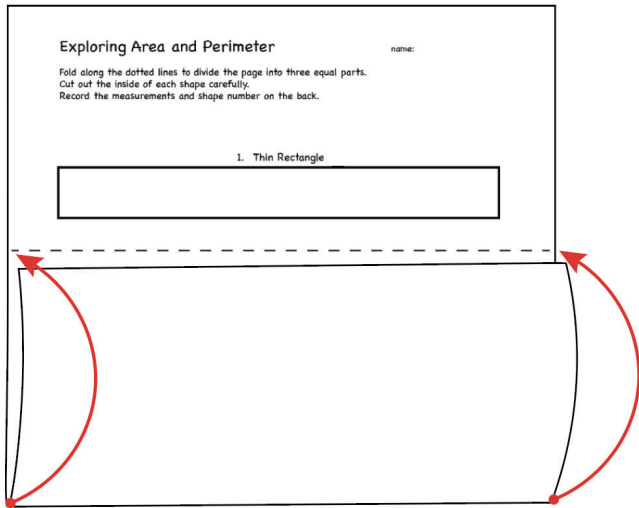
These shapes are small enough that students can simply count around the outside edge to find perimeter, and count the squares to find the area. This is also a good way to check their work if they started by calculating the answers using formulas.

**Page 6.** Not only are there complex composite shapes on this page, but there are two shapes that include triangles. In both shapes, the area of the triangles is one-half centimeter squared. The perimeters of Cityscape and T-shirt are mixed numbers.



The centimeter squares in the images above have been divided into sixths. The red lines show the length of a centimeter when the images are not enlarged. Help your students understand that the right triangle has a perimeter of  $1 + 1 + 1 \text{ and } \frac{3}{6} = 3 \text{ and } \frac{1}{3}$  cm. The isosceles triangle has a perimeter of  $1 + 1 \text{ and } \frac{1}{6} + 1 \text{ and } \frac{1}{6} = 3 \text{ and } \frac{1}{3}$  cm. The areas of both triangles are half a centimeter squared.

# Activity Instructions

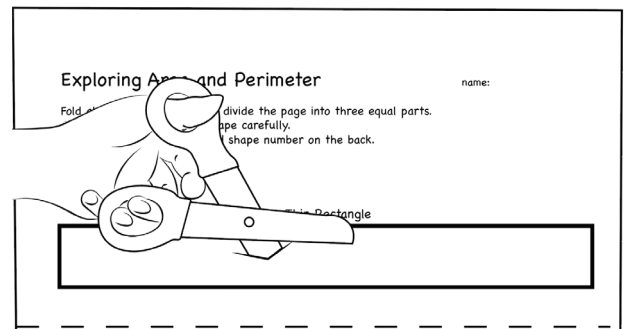
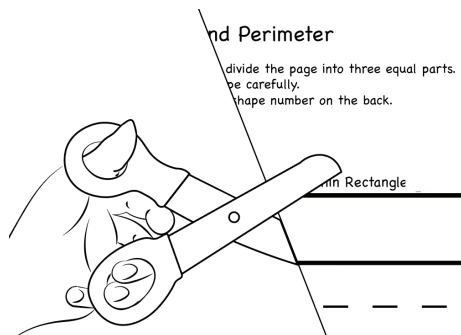


**FOLD**

Looking at the page, you will see two dotted lines running horizontally across the paper. These lines divide the page into thirds. Use them to fold the paper as shown. First, bring the bottom edge of the page up to the dashed line. Crease when the edge of the paper exactly lines up with the dashes.

Open up the paper. Fold and crease the top edge in the same way.

Open the paper again. Get ready to cut out the inside of the shapes on the top and bottom panels.



**CUT**

In order to cut out the inside of each shape, begin by folding the page left to right as shown.

Now, you can cut into the middle of a shape without touching the outer edge. After the first cut, unfold the paper, insert the bottom blade of your scissors into the cut, and snip your way around the interior of the shape.


Exploring Area and Perimeter

Record the shape number, shape name and measurements next to its cutout.  
Use centimeters to measure the perimeter.  
Measure the area in square centimeters.

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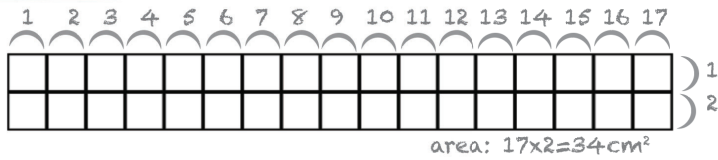
---

2. Large Rectangle



page 1 © 2024 UnCommon-Core.com

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17



area:  $17 \times 2 = 34 \text{ cm}^2$

Exploring Area and Perimeter

The amount of space the shape takes up is 34 square centimeters.

Record the shape number, shape name and measurements next to its cutout.  
Use centimeters to measure the perimeter.  
Measure the area in square centimeters.

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## MEASURE

Once both shapes have been cut out, fold the top flap down again. You should be able to see the centimeter grid through the 'window' you just cut out.

Use the 'back' of the paper to calculate the area and perimeter of the shape. Show your work.

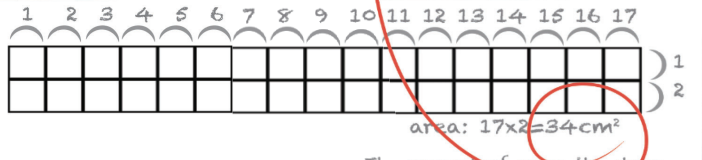
name: \_\_\_\_\_

Area and Perimeter Trifold Answer Sheet

1. Thin Rectangle Area: $34 \text{ cm}^2$ Perimeter: _____	6. Smallest Square Area: _____ Perimeter: _____
2. Large Rectangle	7. Square Area: _____ Perimeter: _____
	8. Right Triangle Area: _____ Perimeter: _____
	9. Another Square

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17



area:  $17 \times 2 = 34 \text{ cm}^2$

Exploring Area and Perimeter

The amount of space the shape takes up is 34 square centimeters.

Record the shape number, shape name and measurements next to its cutout.  
Use centimeters to measure the perimeter.  
Measure the area in square centimeters.

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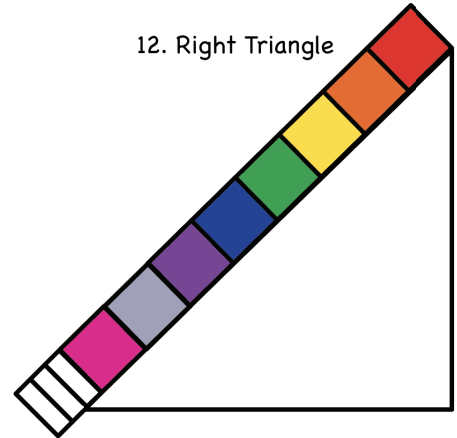
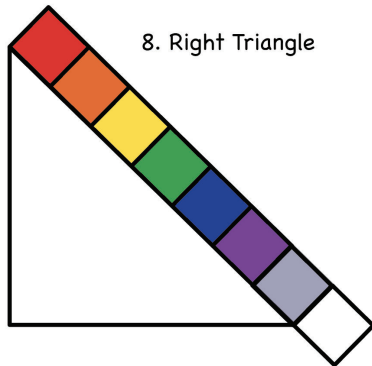
## RECORD

Record the area and perimeter of each shape on the answer sheet. Double check to make sure you are writing the right place.

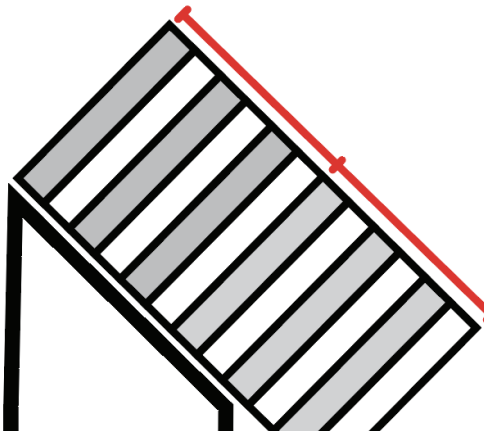
# Activity Instructions

Measuring triangles can be tricky.

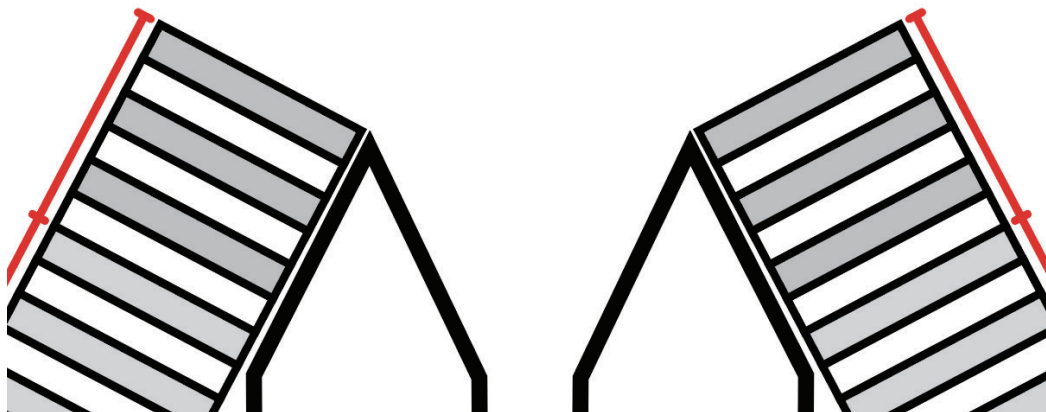
Use these close up views of triangles to help you find the perimeter.



The small right triangle below is found in 18. Cityscapes and 19. T-shirt.



The images below show both sides of the isosceles triangle in 18. Cityscapes.

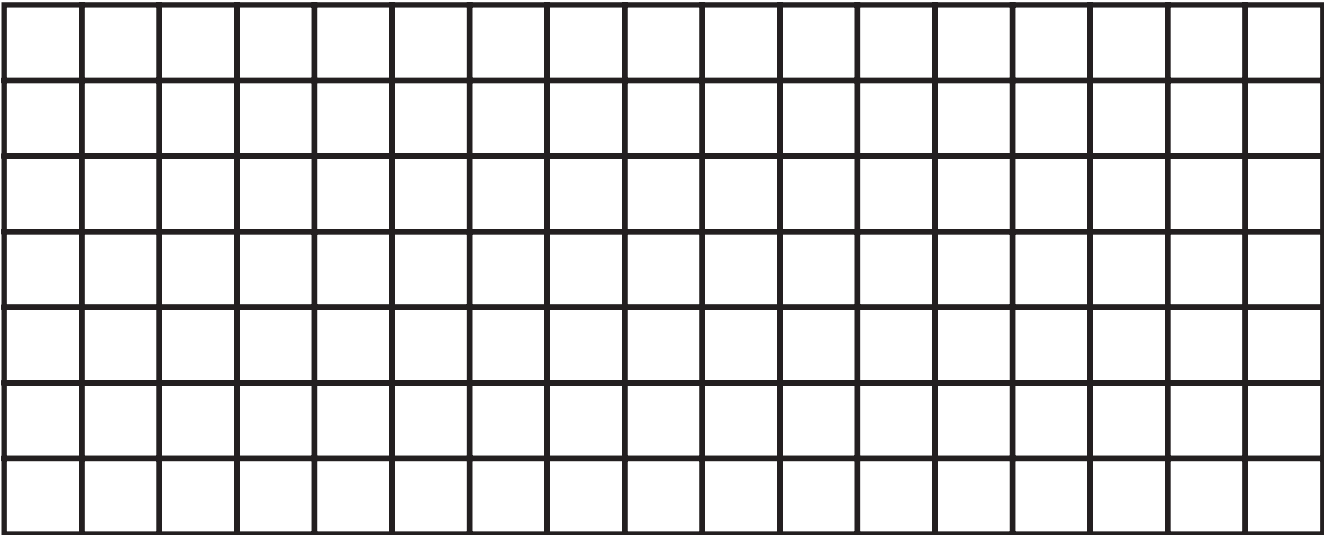


# Exploring Area and Perimeter

name:

Fold along the dotted lines to divide the page into three equal parts.  
Cut out the inside of each shape carefully.  
Record the measurements and shape number on the back.

## 1. Thin Rectangle



## 2. Large Rectangle





# Exploring Area and Perimeter

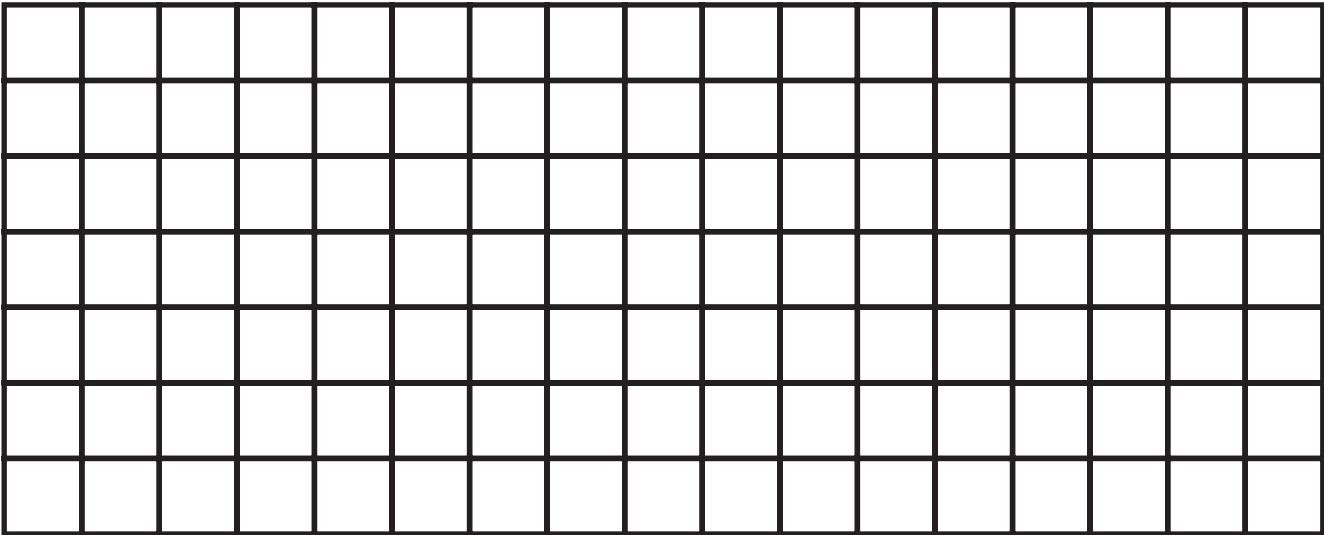
Record the shape number, shape name and measurements next to its cutout.  
Use centimeters to measure the perimeter.  
Measure the area in square centimeters.

# Exploring Area and Perimeter

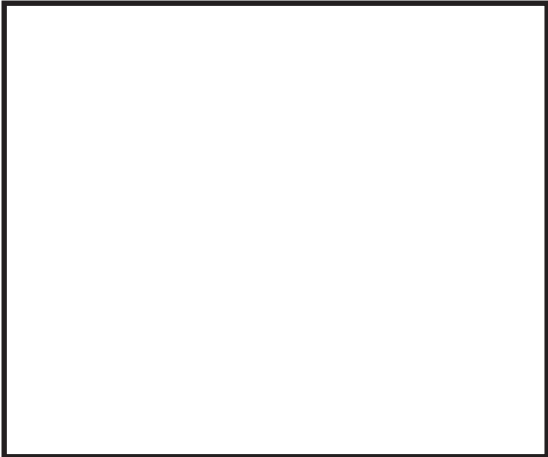
name: \_\_\_\_\_

Fold along the dotted lines to divide the page into three equal parts.  
Cut out the inside of each shape carefully.  
Record the measurements and shape number on the back.

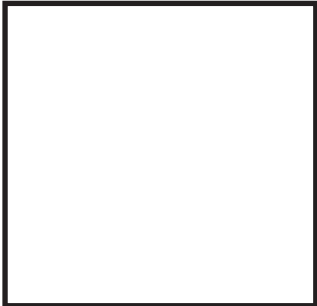
3. Long Rectangle



4. Rectangle



5. Small Square



# Exploring Area and Perimeter

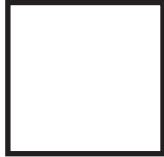
Record the shape number, shape name and measurements next to its cutout.  
Use centimeters to measure the perimeter.  
Measure the area in square centimeters.

# Exploring Area and Perimeter

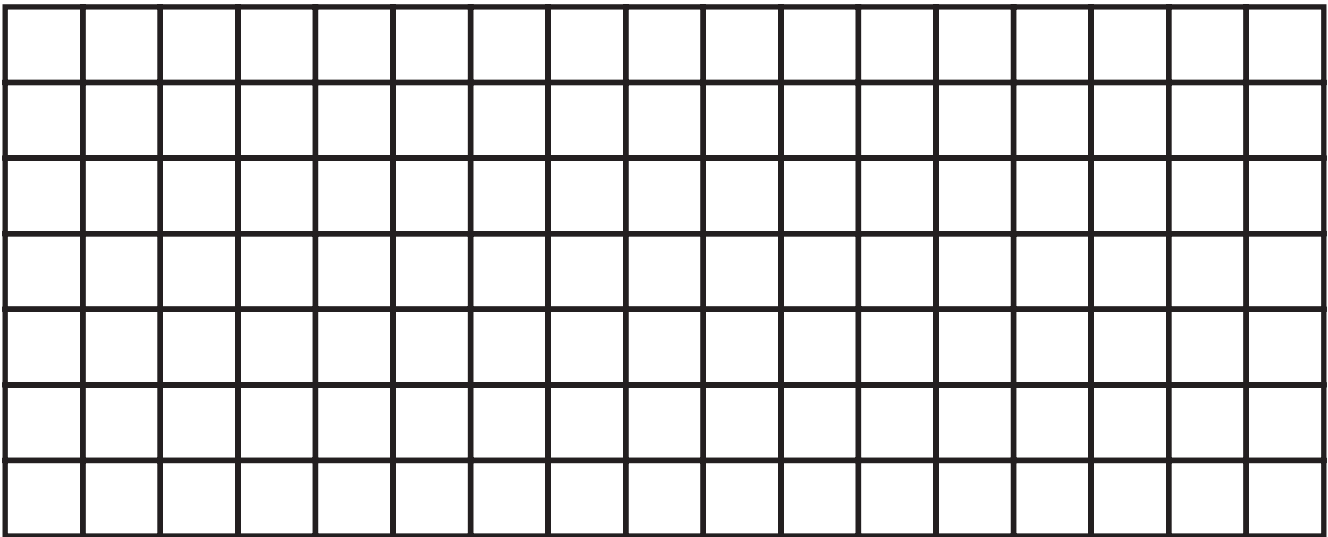
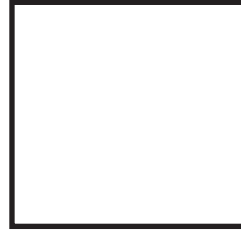
name: \_\_\_\_\_

Fold along the dotted lines to divide the page into three equal parts.  
Cut out the inside of each shape carefully.  
Record the measurements and shape number on the back.

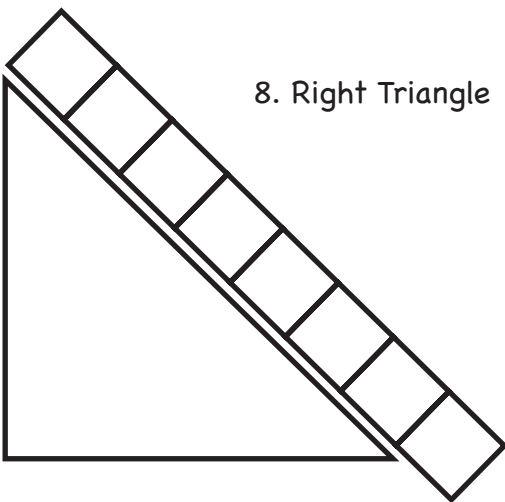
6. Smallest Square



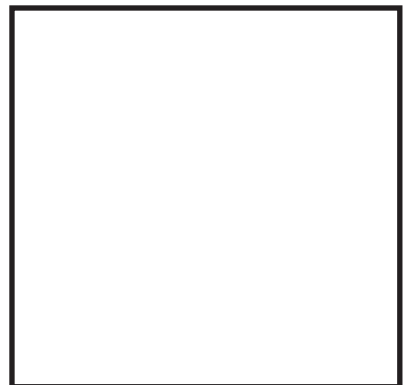
7. Square



8. Right Triangle



9. Another Square



# Exploring Area and Perimeter

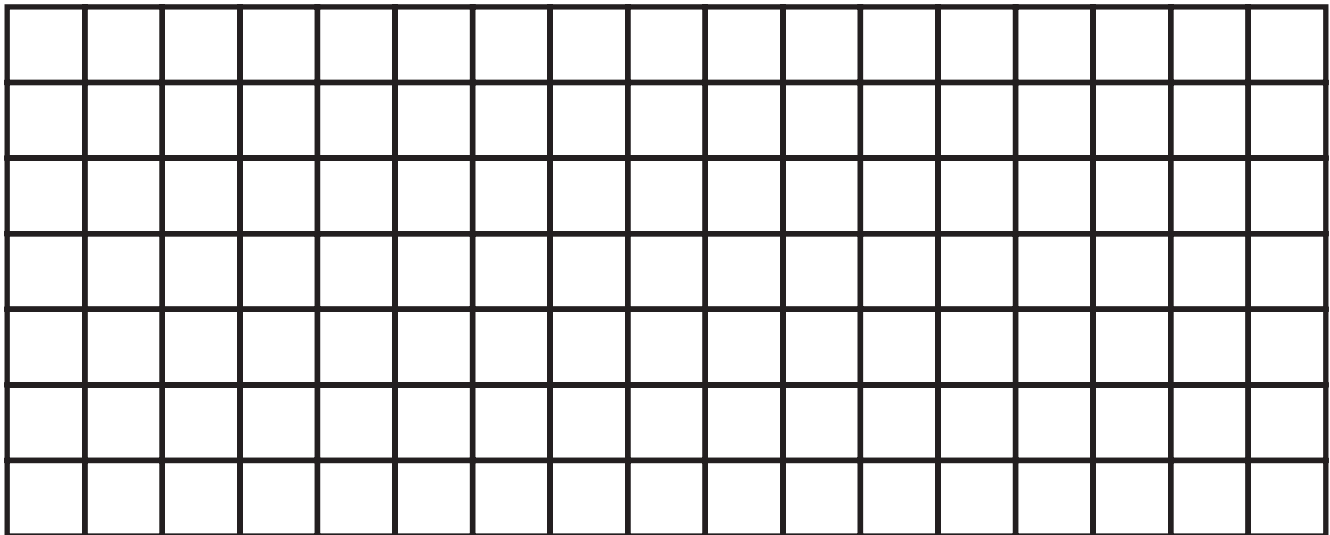
Record the shape number, shape name and measurements next to its cutout.  
Use centimeters to measure the perimeter.  
Measure the area in square centimeters.

# Exploring Area and Perimeter

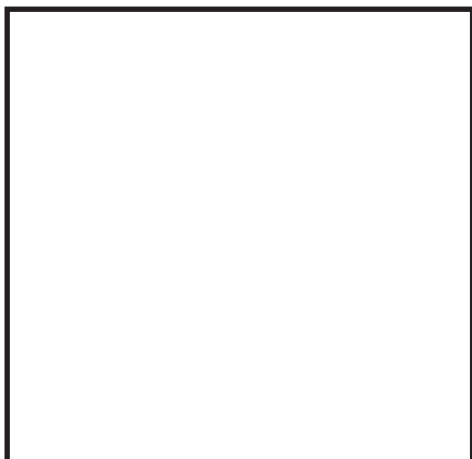
name: \_\_\_\_\_

Fold along the dotted lines to divide the page into three equal parts.  
Cut out the inside of each shape carefully.  
Record the measurements and shape number on the back.

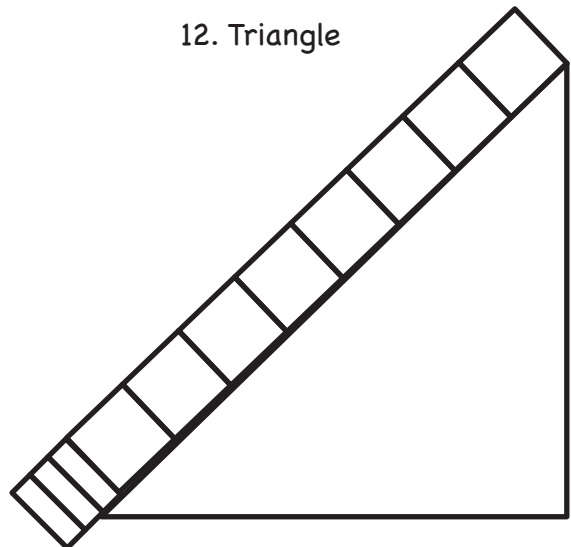
10. Another Rectangle



11. Last Square



12. Triangle



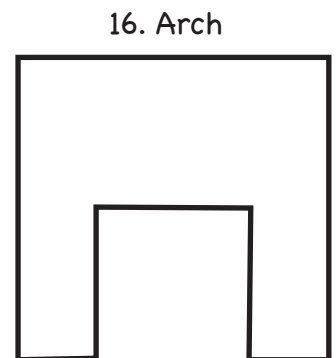
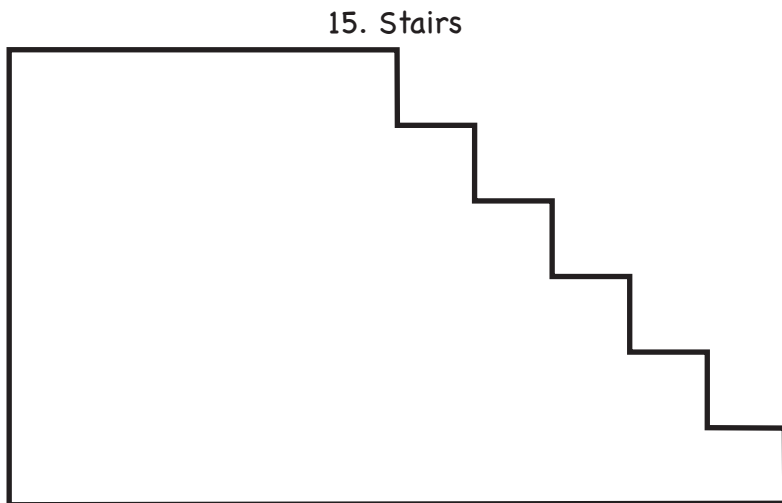
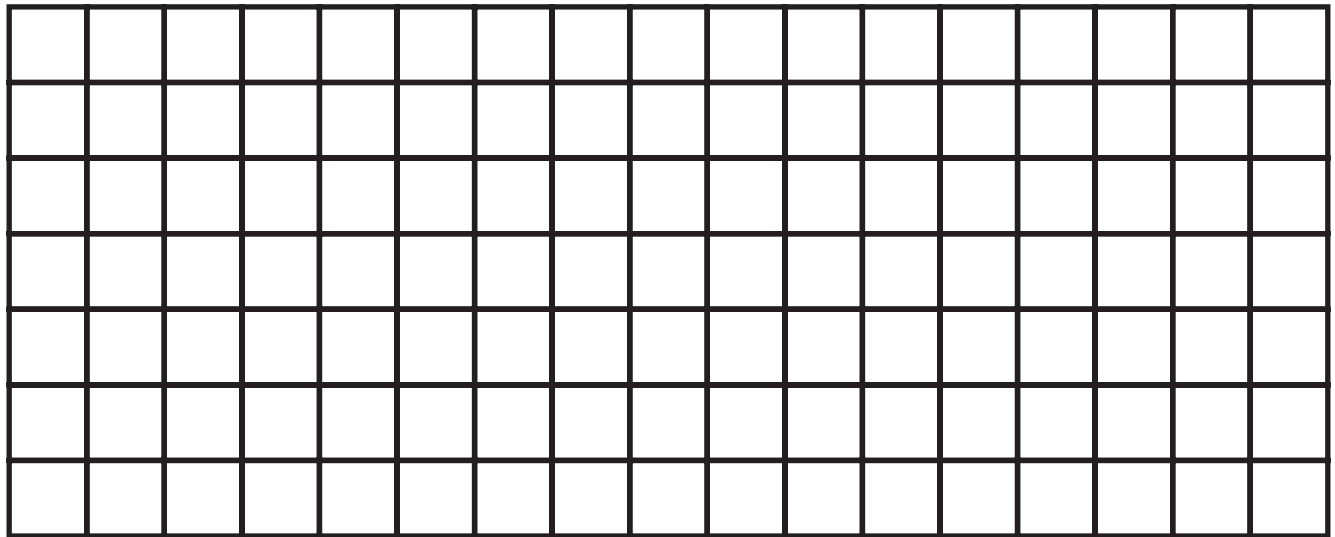
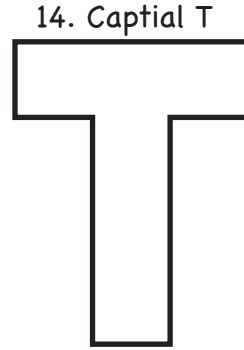
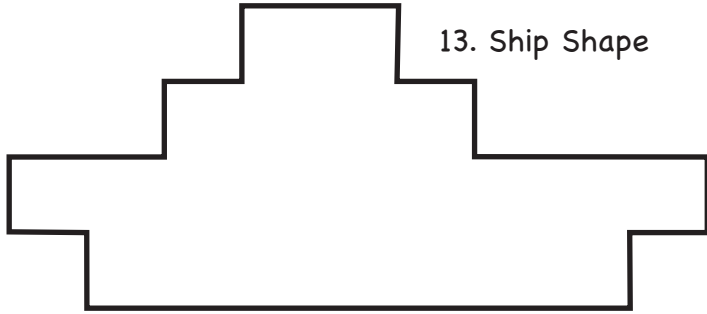
# Exploring Area and Perimeter

Record the shape number, shape name and measurements next to its cutout.  
Use centimeters to measure the perimeter.  
Measure the area in square centimeters.

# Exploring Area and Perimeter

name: \_\_\_\_\_

Fold along the dotted lines to divide the page into three equal parts.  
Cut out the inside of each shape carefully.  
Record the measurements and shape number on the back.





# Exploring Area and Perimeter

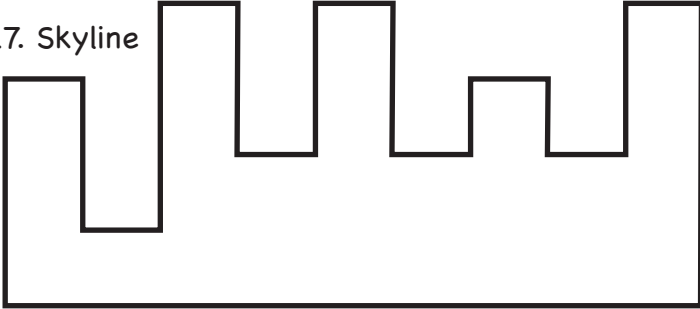
Record the shape number, shape name and measurements next to its cutout.  
Use centimeters to measure the perimeter.  
Measure the area in square centimeters.

# Exploring Area and Perimeter

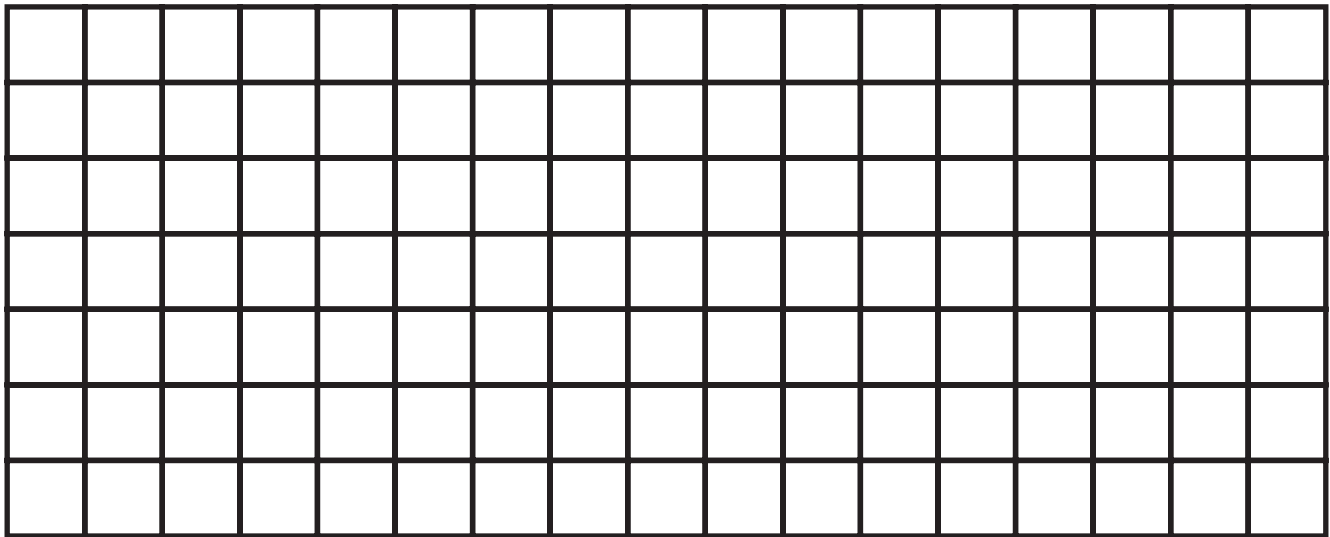
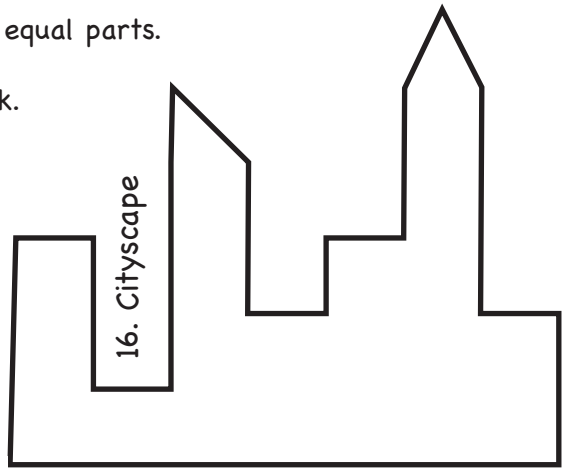
name: \_\_\_\_\_

Fold along the dotted lines to divide the page into three equal parts.  
Cut out the inside of each shape carefully.  
Record the measurements and shape number on the back.

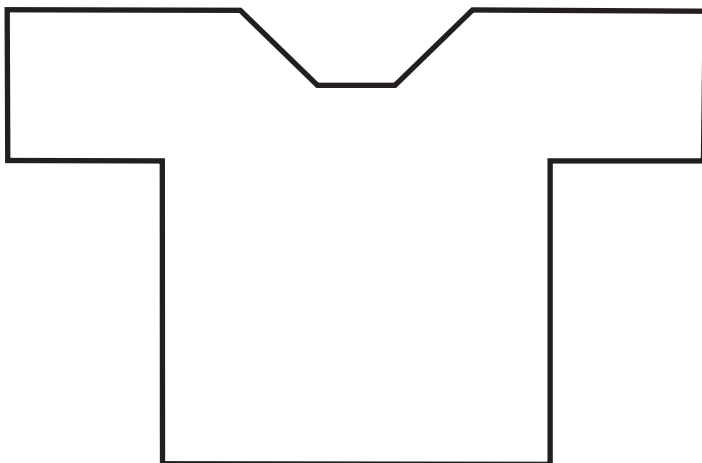
17. Skyline



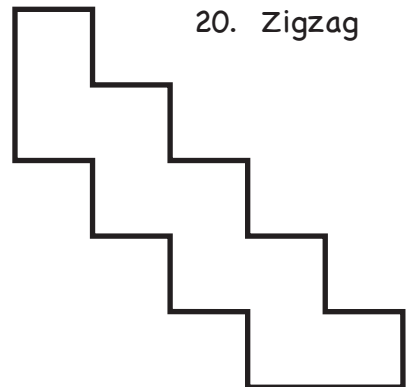
16. Cityscape



19. T-shirt



20. Zigzag



# Exploring Area and Perimeter

Record the shape number, shape name and measurements next to its cutout.  
Use centimeters to measure the perimeter.  
Measure the area in square centimeters.

# Area and Perimeter Trifold Answer Sheet

name:

1. Thin Rectangle Area: Perimeter:	6. Smallest Square Area: Perimeter:
2. Large Rectangle Area: Perimeter:	7. Square Area: Perimeter:
3. Long Rectangle Area: Perimeter:	8. Right Triangle Area: Perimeter:
4. Rectangle Area: Perimeter:	9. Another Square Area: Perimeter:
5. Small Square Area: Perimeter:	10. Another Rectangle Area: Perimeter:

# Area and Perimeter Trifold Answer Sheet

11. Last Square Area: Perimeter:	16. Arch Area: Perimeter:
12. Triangle Area: Perimeter:	17. Skyline Area: Perimeter:
13. Ship Shape Area: Perimeter:	18. Cityscape Area: Perimeter:
14. Captial T Area: Perimeter:	19. T-shirt Area: Perimeter:
15. Stairs Area: Perimeter:	20. Zigzag Area: Perimeter:

# Area and Perimeter Trifold Answer Sheet

name:

1. Thin Rectangle Area: Perimeter:	6. Smallest Square Area: Perimeter:
2. Large Rectangle Area: Perimeter:	7. Square Area: Perimeter:
3. Long Rectangle Area: Perimeter:	8. Right Triangle Area: Perimeter:
4. Rectangle Area: Perimeter:	9. Another Square Area: Perimeter:
5. Small Square Area: Perimeter:	10. Another Rectangle Area: Perimeter:

# Area and Perimeter Trifold Answer Sheet

11. Last Square Area: Perimeter:	16. Arch Area: Perimeter:
12. Triangle Area: Perimeter:	17. Skyline Area: Perimeter:
13. Ship Shape Area: Perimeter:	18. Cityscape Area: Perimeter:
14. Captial T Area: Perimeter:	19. T-shirt Area: Perimeter:
15. Stairs Area: Perimeter:	20. Zigzag Area: Perimeter:

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