Kenny, D. A., Archambault, F. X., Jr., & Hallmark, B. W. (1995). *The effects of group composition on gifted and non-gifted elementary students in cooperative learning groups* (Research Monograph 95116). University of Connecticut, The National Research Center on the Gifted and Talented. https://nrcgt.uconn.edu/wp-content/uploads/sites/953/2015/04/rm95116.pdf

Mathematics Curriculum Worksheets

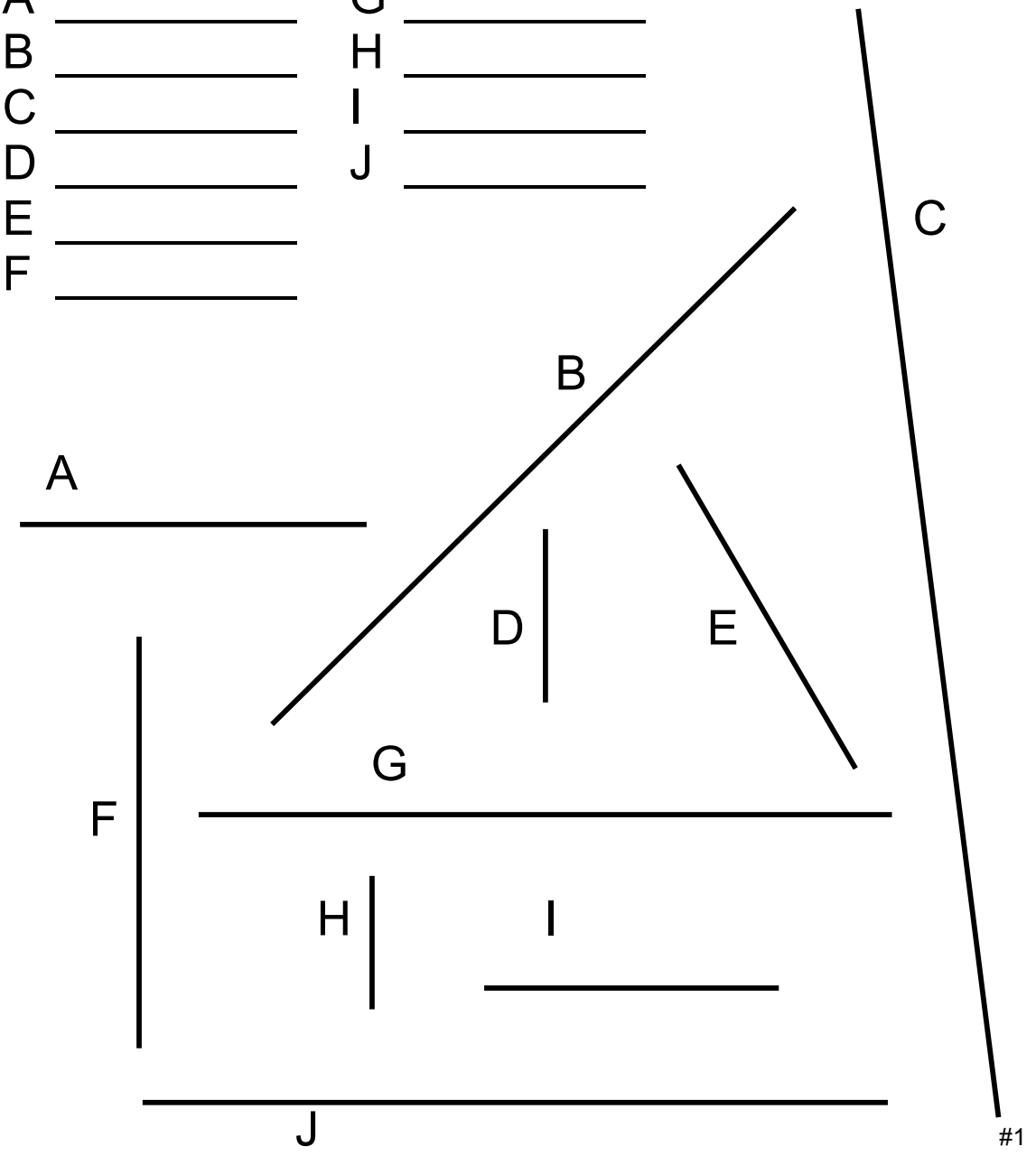
Line Measurement

Color Group _____

Use your ruler to measure the length of each of these lines.
Place your answers in centimeters in the spaces provided.

A _____
B _____
C _____
D _____
E _____
F _____

G _____
H _____
I _____
J _____



#1

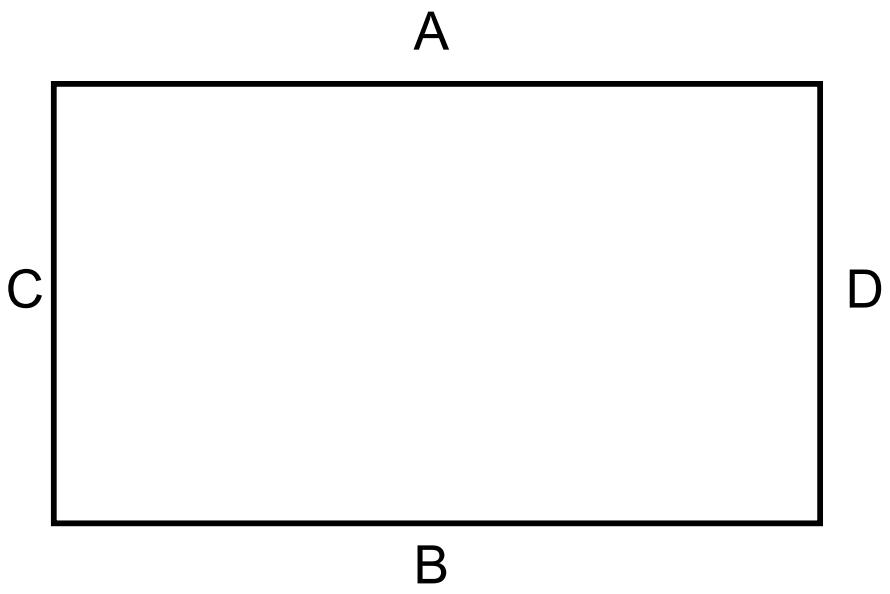
Kenny, D. A., Archambault, F. X., Jr., & Hallmark, B. W. (1995). *The effects of group composition on gifted and non-gifted elementary students in cooperative learning groups* (Research Monograph 95116). University of Connecticut, The National Research Center on the Gifted and Talented. https://nrcgt.uconn.edu/wp-content/uploads/sites/953/2015/04/rm95116.pdf

Introduction to Perimeter

Color Group _____

The distance around a figure is the **perimeter**. You find the **perimeter** of a figure by adding the lengths of the sides.

Use your ruler and measure the length in centimeters of each side of the rectangle shown below. Put your answers in the spaces at the bottom of the page. Add the lengths of the four sides to find the **perimeter**.



Add the lengths of each side of the rectangle to find the **perimeter** of the rectangle.

_____	+	_____	+	_____	+	_____	=	_____
Side A		Side B		Side C		Side D		Perimeter

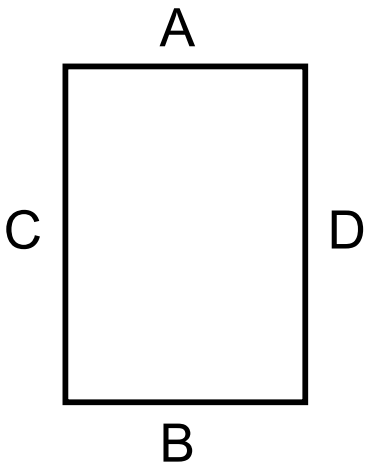
#2A

Kenny, D. A., Archambault, F. X., Jr., & Hallmark, B. W. (1995). *The effects of group composition on gifted and non-gifted elementary students in cooperative learning groups* (Research Monograph 95116). University of Connecticut, The National Research Center on the Gifted and Talented. https://nrcgt.uconn.edu/wp-content/uploads/sites/953/2015/04/rm95116.pdf

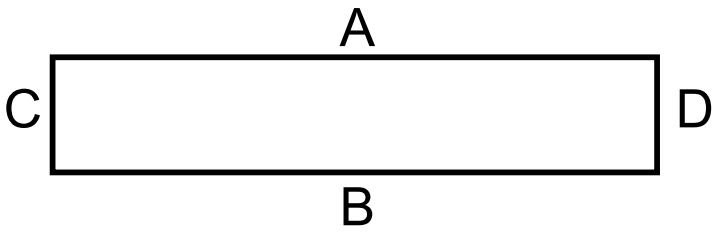
Calculating Perimeter

Color Group _____

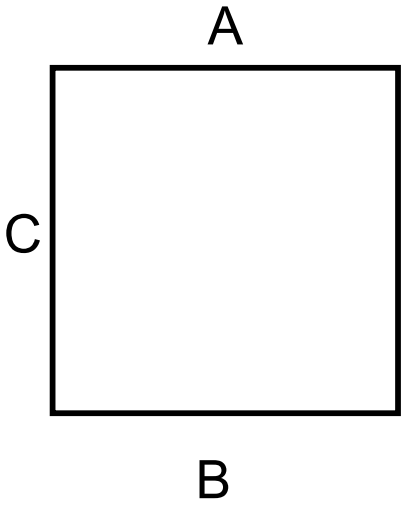
Use your ruler and measure the length in centimeter of each side of shapes shown below. Put your answers in the spaces besides each shape. Add the lengths of the four sides to find the **perimeter**.



___ A + ___ B + ___ C + ___ D = _____ Perimeter



___ A + ___ B + ___ C + ___ D = _____ Perimeter



___ A + ___ B + ___ C + ___ D = _____ Perimeter

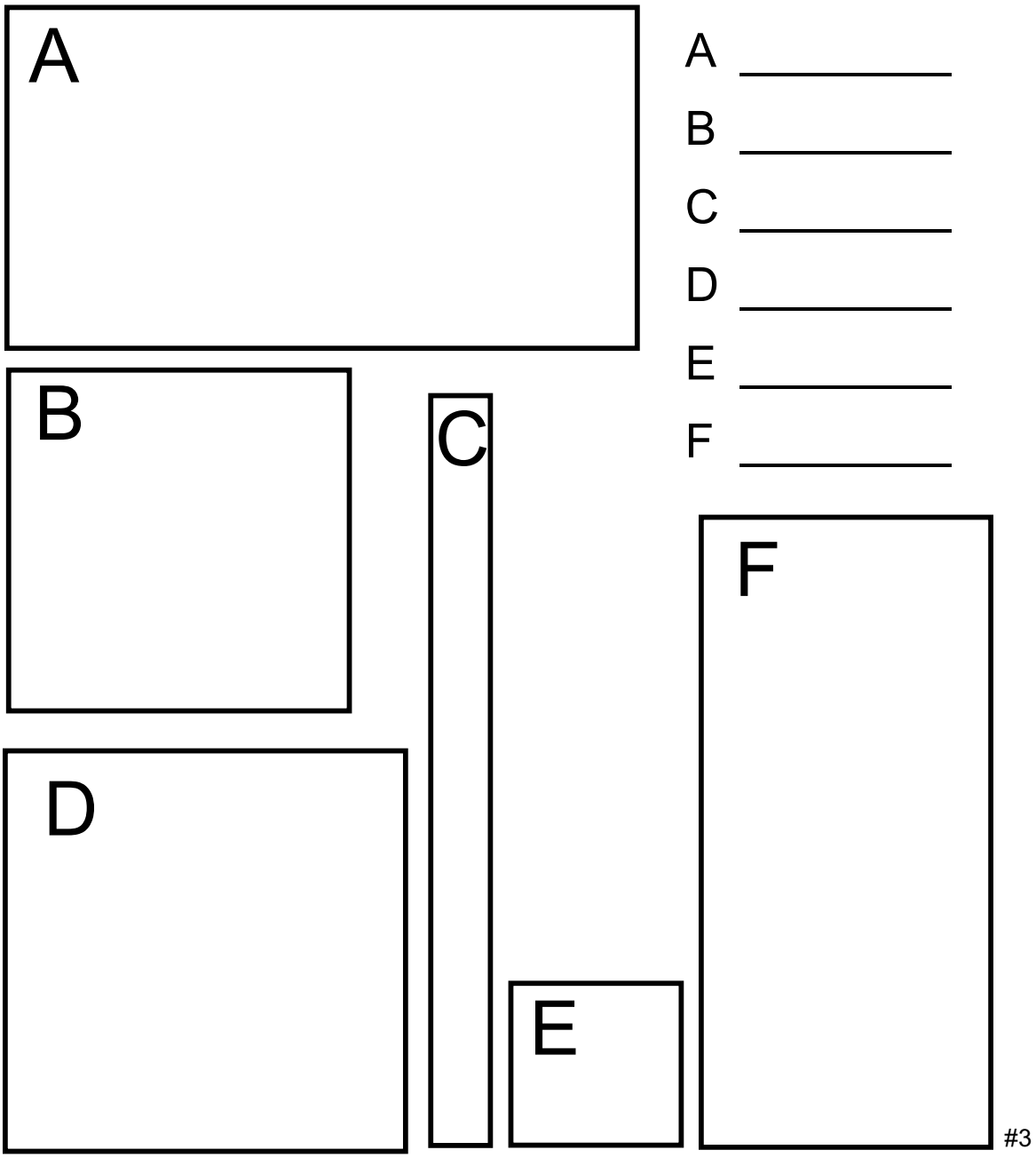
#2B

Kenny, D. A., Archambault, F. X., Jr., & Hallmark, B. W. (1995). *The effects of group composition on gifted and non-gifted elementary students in cooperative learning groups* (Research Monograph 95116). University of Connecticut, The National Research Center on the Gifted and Talented. https://nrcgt.uconn.edu/wp-content/uploads/sites/953/2015/04/rm95116.pdf

Perimeter of Rectangles

Color Group _____

Use your ruler and measure the **perimeter** of the rectangles and squares below. Place your answers in centimeters in the spaces provided.



A _____

B _____

C _____

D _____

E _____

F _____

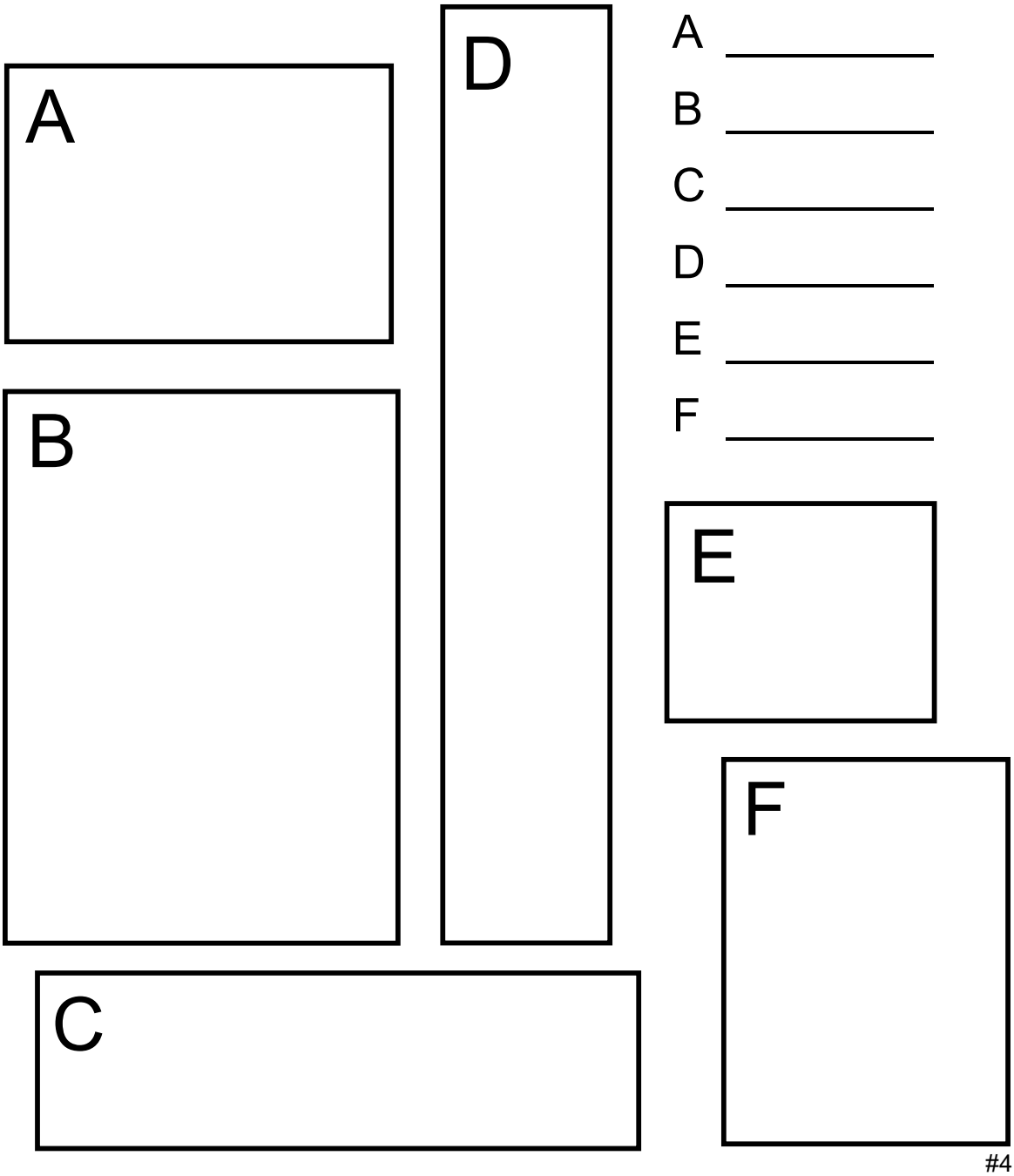
#3

Kenny, D. A., Archambault, F. X., Jr., & Hallmark, B. W. (1995). *The effects of group composition on gifted and non-gifted elementary students in cooperative learning groups* (Research Monograph 95116). University of Connecticut, The National Research Center on the Gifted and Talented. https://nrcgt.uconn.edu/wp-content/uploads/sites/953/2015/04/rm95116.pdf

More Practices with Perimeter of Rectangles

Color Group _____

Use your ruler and measure the **perimeter** of the rectangles and squares below. Place your answers in centimeters in the spaces provided.



A _____

B _____

C _____

D _____

E _____

F _____

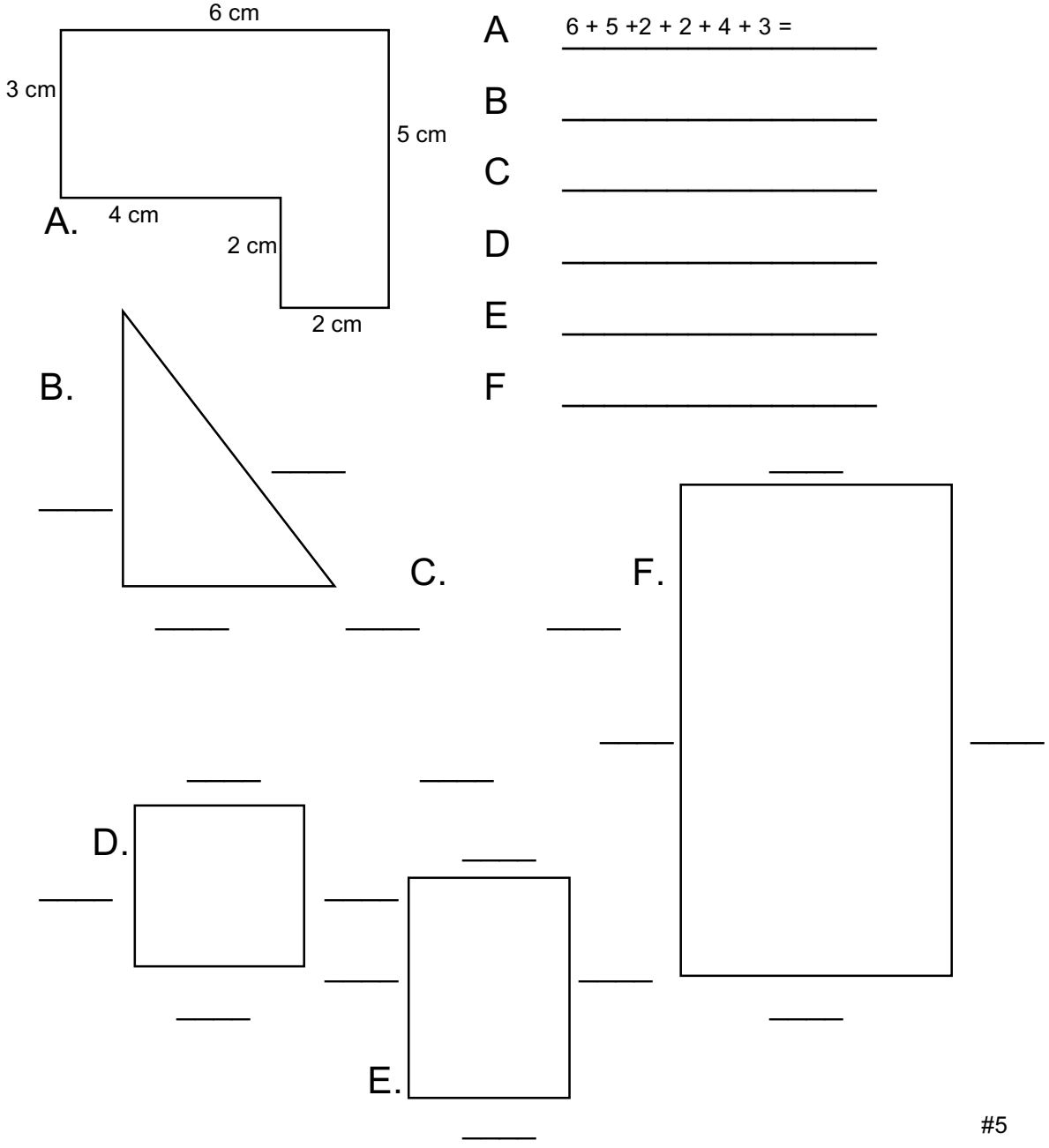
#4

Kenny, D. A., Archambault, F. X., Jr., & Hallmark, B. W. (1995). *The effects of group composition on gifted and non-gifted elementary students in cooperative learning groups* (Research Monograph 95116). University of Connecticut, The National Research Center on the Gifted and Talented. https://nrcgt.uconn.edu/wp-content/uploads/sites/953/2015/04/rm95116.pdf

Perimeter of Polygons

Color Group _____

As you learned in a previous activity, the distance around a figure is the **perimeter**. We add the length of all the sides to find the **perimeter**. Measure each figure below and find the **perimeter**. Place your answers in centimeters in the spaces provided.



A 6 + 5 +2 + 2 + 4 + 3 = _____

B _____

C _____

D _____

E _____

F _____

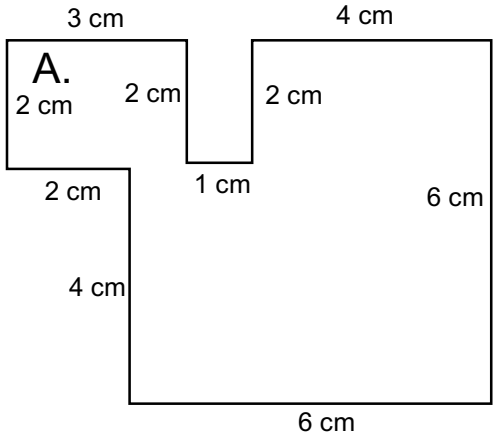
#5

Kenny, D. A., Archambault, F. X., Jr., & Hallmark, B. W. (1995). *The effects of group composition on gifted and non-gifted elementary students in cooperative learning groups* (Research Monograph 95116). University of Connecticut, The National Research Center on the Gifted and Talented. https://nrcgt.uconn.edu/wp-content/uploads/sites/953/2015/04/rm95116.pdf

Practicing Perimeter

Color Group _____

As you learned in a previous activity, the distance around a figure is the **perimeter**. We add the length of all the sides to find the **perimeter**. Measure each figure below and put your measurements on the lines by each figure. Add the lengths of each side and place you answers in centimeters in the space provided.



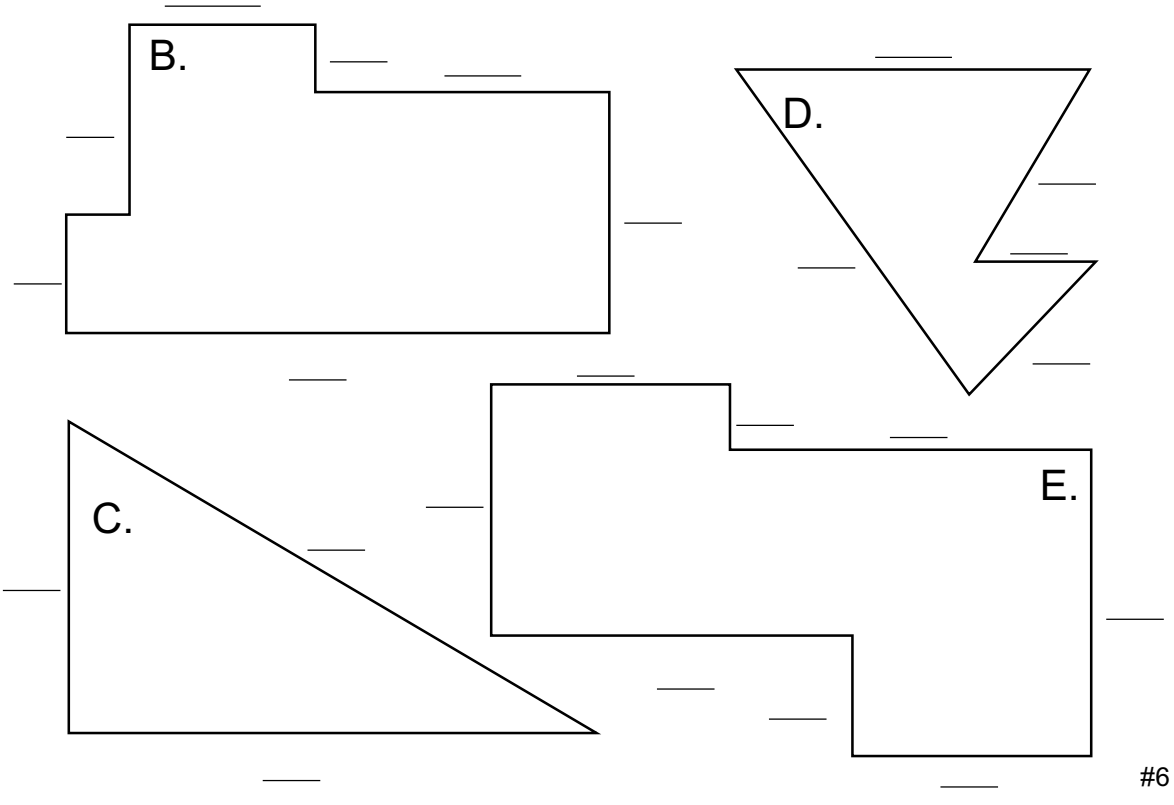
A 3+2+1+2+4+6+6+4+2+2= _____

B _____

C _____

D _____

E _____



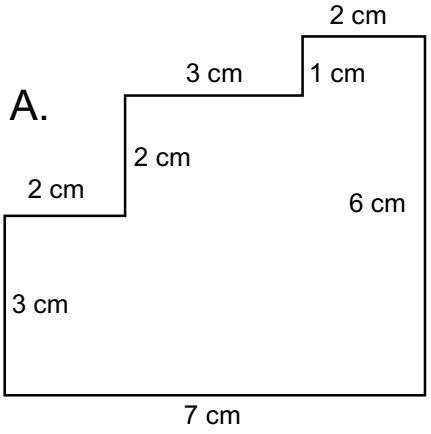
#6

Kenny, D. A., Archambault, F. X., Jr., & Hallmark, B. W. (1995). *The effects of group composition on gifted and non-gifted elementary students in cooperative learning groups* (Research Monograph 95116). University of Connecticut, The National Research Center on the Gifted and Talented. https://nrcgt.uconn.edu/wp-content/uploads/sites/953/2015/04/rm95116.pdf

Multiple Sided Perimeters

Color Group _____

We add the length of all the sides of a figure to find the **perimeter**. Measure each figure below and put your measurements on the lines by each figure. Add the lengths of each side and place your answers in centimeters in the spaces provided.



A 2+2+3+1+2+6+7+3=_____

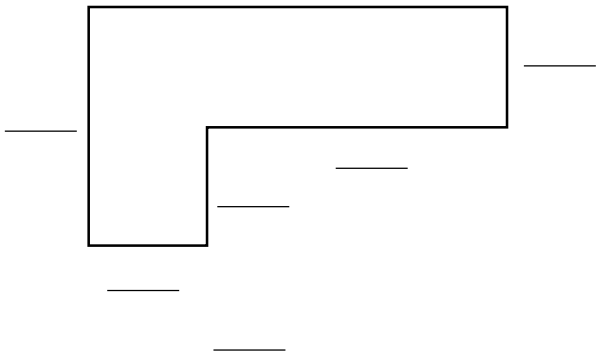
B _____

C _____

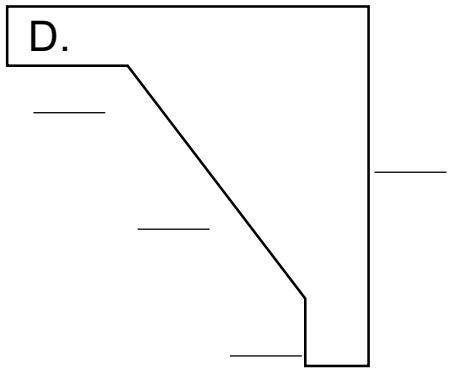
D _____

E _____

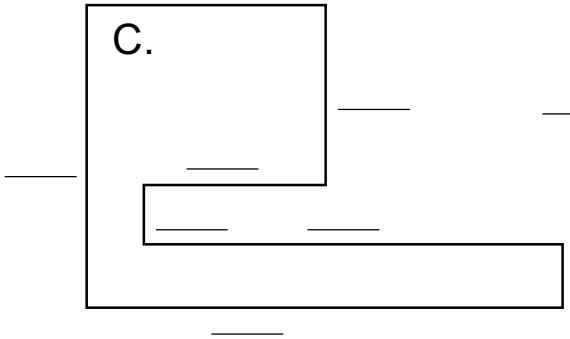
B.



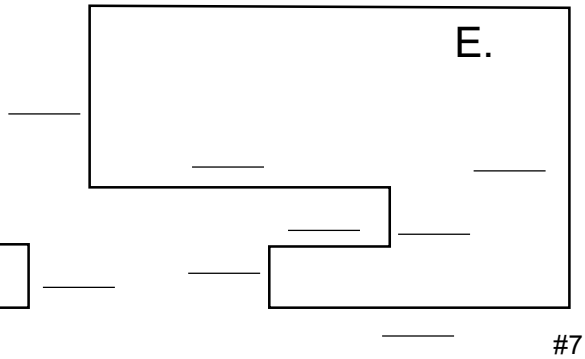
D.



C.



E.



#7

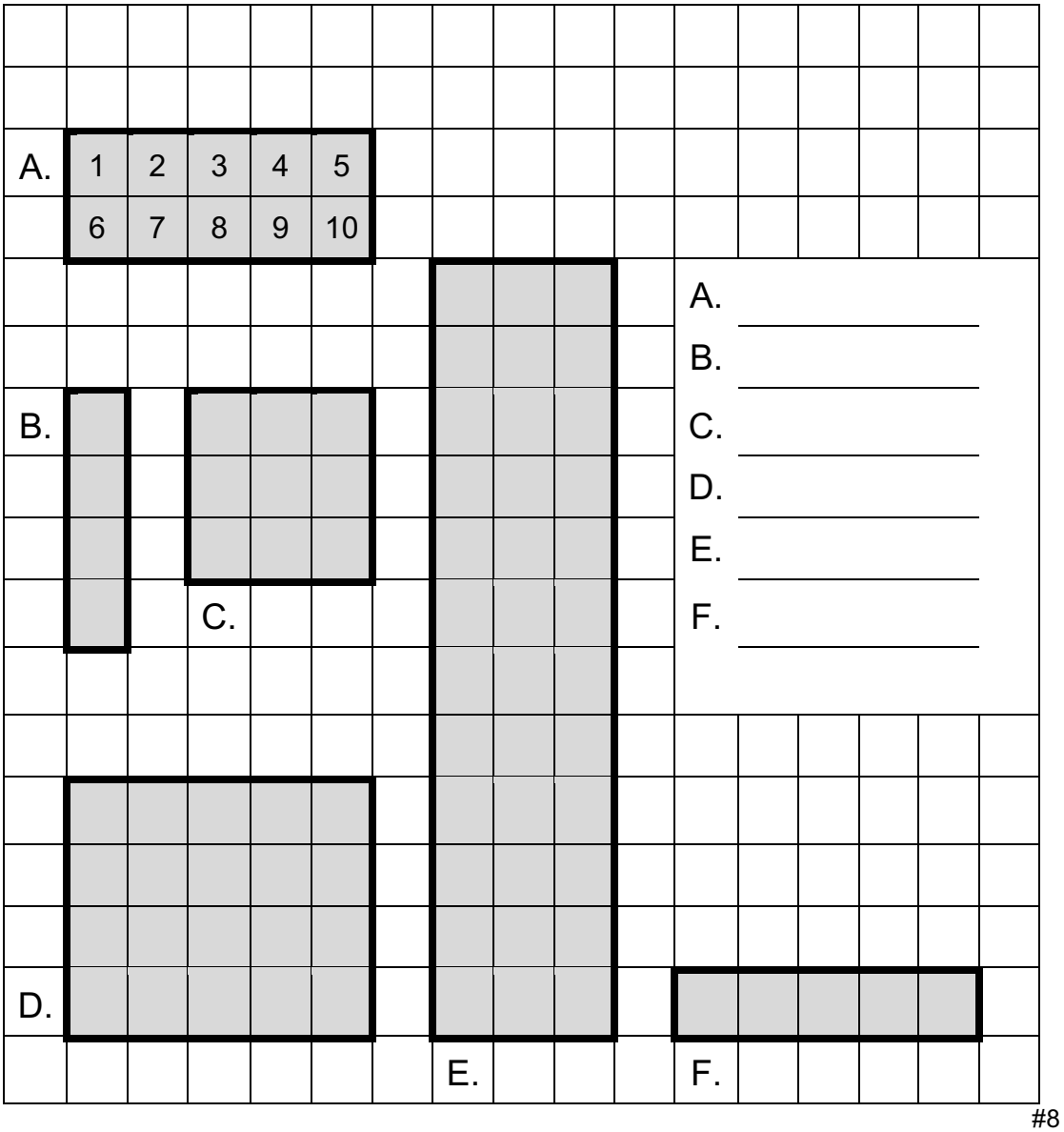
Kenny, D. A., Archambault, F. X., Jr., & Hallmark, B. W. (1995). *The effects of group composition on gifted and non-gifted elementary students in cooperative learning groups* (Research Monograph 95116). University of Connecticut, The National Research Center on the Gifted and Talented. https://nrcgt.uconn.edu/wp-content/uploads/sites/953/2015/04/rm95116.pdf

Introduction to Area

Color Group _____

The **area** of a figure is the number of **square units** needed to cover that figure. The **square unit** we will use is a square centimeter. Use the grid squares as units. Count the number of square units in each figure to find its area. Give the area of each figure in square centimeters.

1 square = 1 square centimeter



#8

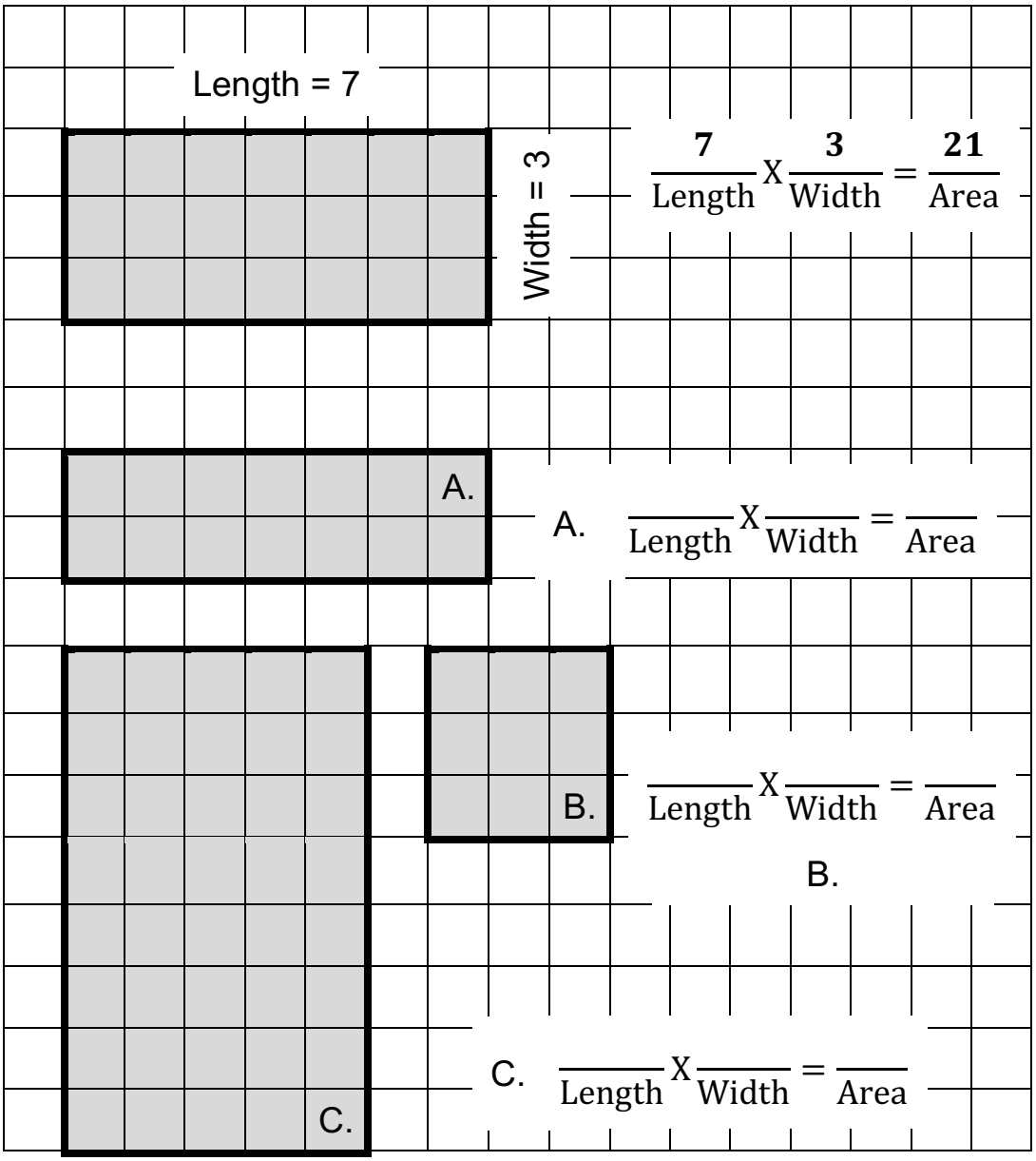
Kenny, D. A., Archambault, F. X., Jr., & Hallmark, B. W. (1995). *The effects of group composition on gifted and non-gifted elementary students in cooperative learning groups* (Research Monograph 95116). University of Connecticut, The National Research Center on the Gifted and Talented. https://nrcgt.uconn.edu/wp-content/uploads/sites/953/2015/04/rm95116.pdf

Calculating Area

Color Group _____

Counting the square units is not the easiest way to find the **area** of a figure. You can find the **area** of a rectangular region by multiplying the **length** by the **width**. Multiple the **length** by the **width** to find the areas of the rectangles below.

Area = Length X Width



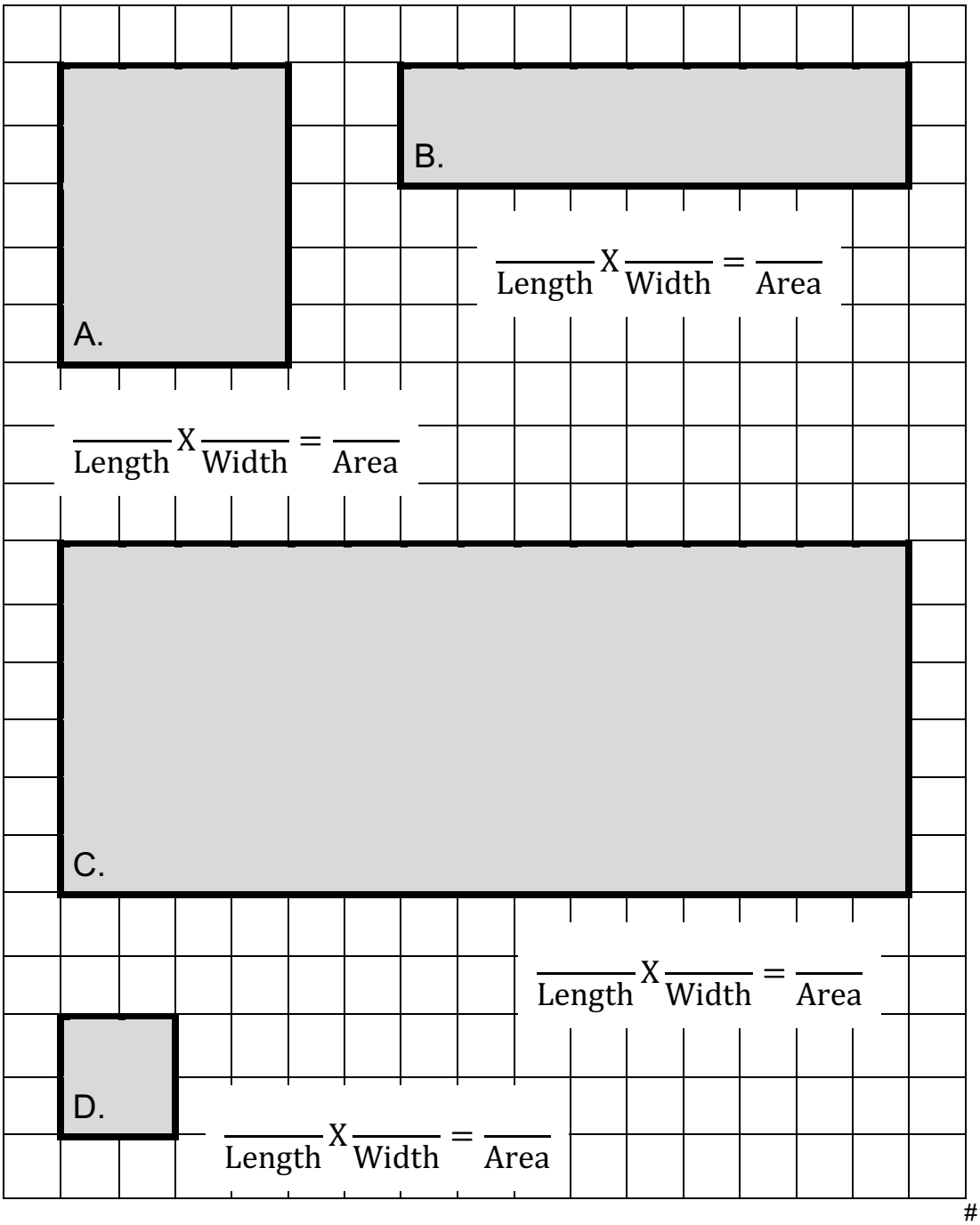
#9

Kenny, D. A., Archambault, F. X., Jr., & Hallmark, B. W. (1995). *The effects of group composition on gifted and non-gifted elementary students in cooperative learning groups* (Research Monograph 95116). University of Connecticut, The National Research Center on the Gifted and Talented. https://nrcgt.uconn.edu/wp-content/uploads/sites/953/2015/04/rm95116.pdf

Area Calculations

Color Group _____

Find the **area** of the rectangle regions below by multiplying the **length** by the **width**. Write your answers in square centimeters.



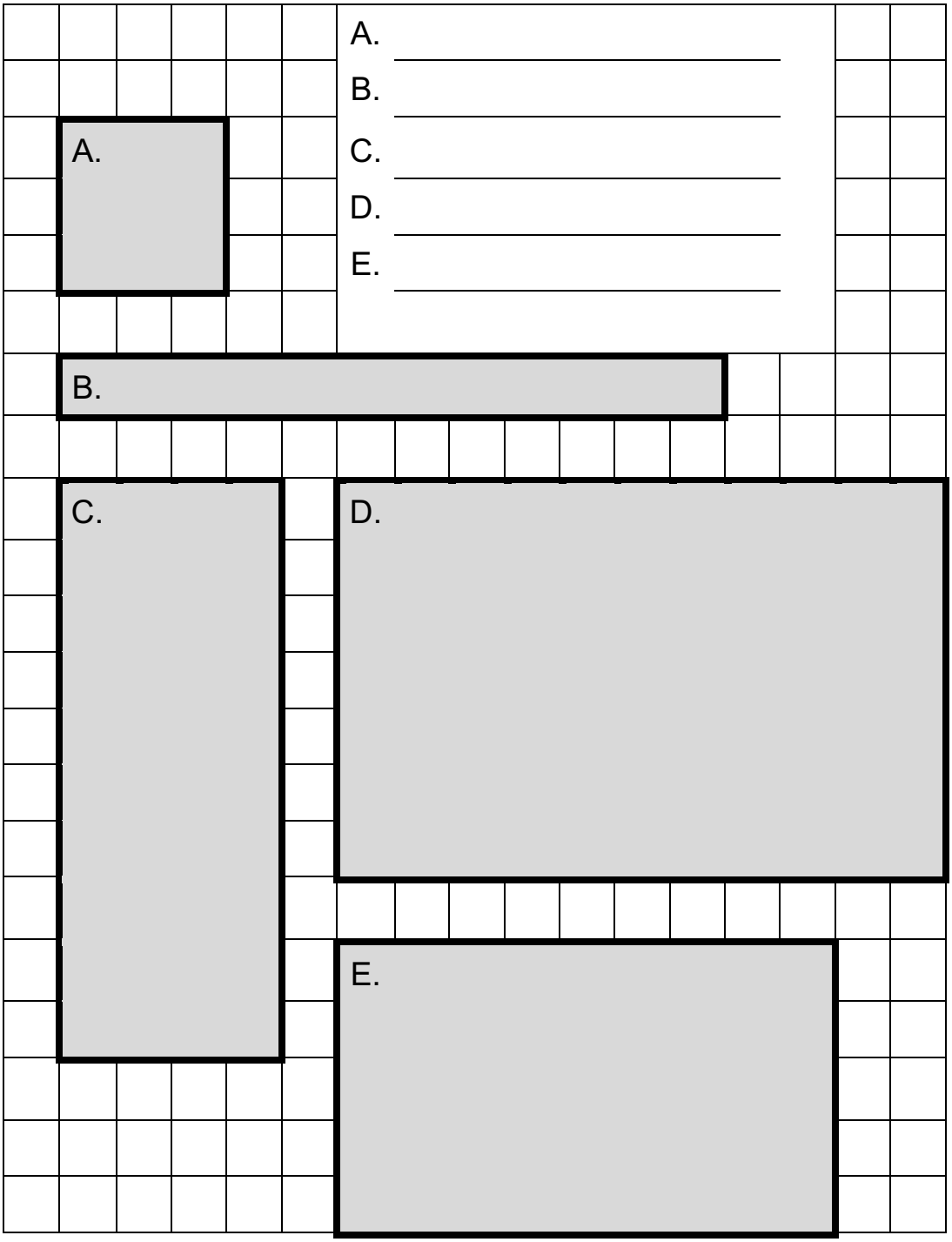
#10

Kenny, D. A., Archambault, F. X., Jr., & Hallmark, B. W. (1995). *The effects of group composition on gifted and non-gifted elementary students in cooperative learning groups* (Research Monograph 95116). University of Connecticut, The National Research Center on the Gifted and Talented. https://nrcgt.uconn.edu/wp-content/uploads/sites/953/2015/04/rm95116.pdf

More Fun with Area Calculations

Color Group _____

Find the **area** of the rectangle regions below by multiplying the **length** by the **width**. Write your answers in square centimeters.



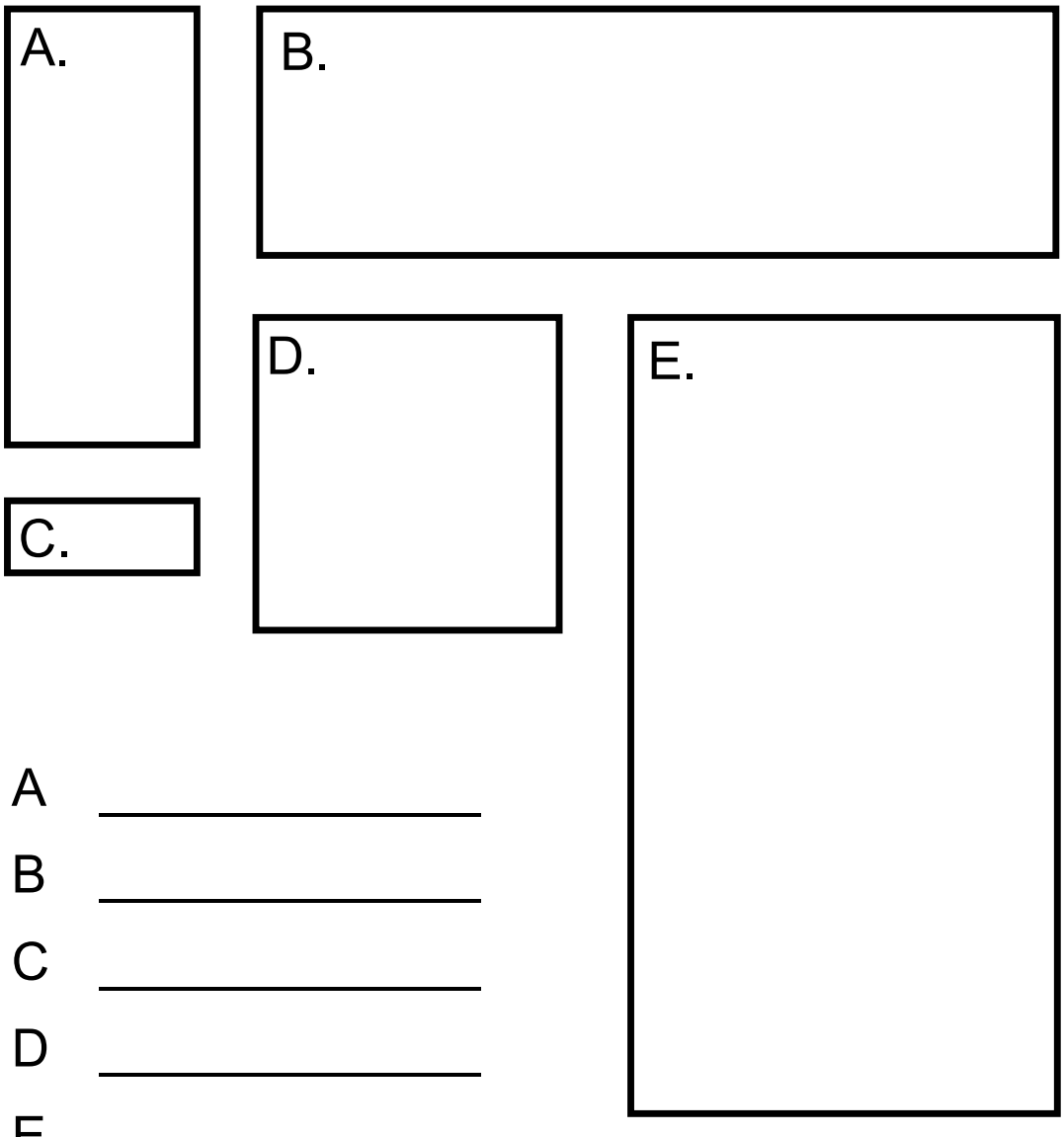
#11

Kenny, D. A., Archambault, F. X., Jr., & Hallmark, B. W. (1995). *The effects of group composition on gifted and non-gifted elementary students in cooperative learning groups* (Research Monograph 95116). University of Connecticut, The National Research Center on the Gifted and Talented. https://nrcgt.uconn.edu/wp-content/uploads/sites/953/2015/04/rm95116.pdf

Measuring and Calculating Area

Color Group _____

Use your ruler to measure the **length** and **width** of the rectangles below. Find the **area** of each rectangle by multiplying the **length** by the **width**. Take your measurements in centimeters and write your answers in square centimeters. Write your answers on the lines at the bottom of the page.



A _____

B _____

C _____

D _____

E _____

#12

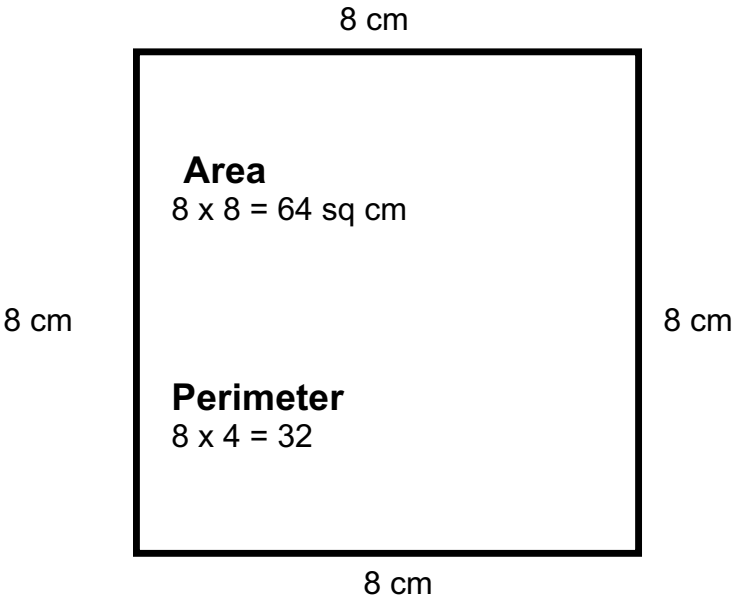
Kenny, D. A., Archambault, F. X., Jr., & Hallmark, B. W. (1995). *The effects of group composition on gifted and non-gifted elementary students in cooperative learning groups* (Research Monograph 95116). University of Connecticut, The National Research Center on the Gifted and Talented. https://nrcgt.uconn.edu/wp-content/uploads/sites/953/2015/04/rm95116.pdf

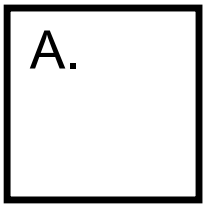
Introduction to Squares

Color Group _____

Squares are special types of rectangles. Since all four sides of a square are the same length, you can find the **perimeter** of a square by multiplying the **length** of one side by 4.

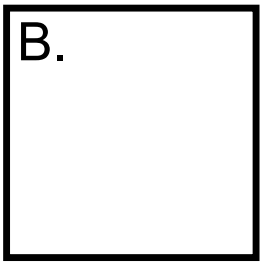
The area of a square is calculated the same way the area of a rectangle is calculated. Since the **length** and **with** of a square are the same, you can calculate the area by measuring any side and multiplying that number by itself. We call this squaring the number.





A. area ___ X ___ = ___ perimeter ___ X _____

B. area ___ X ___ = ___ perimeter ___ X _____



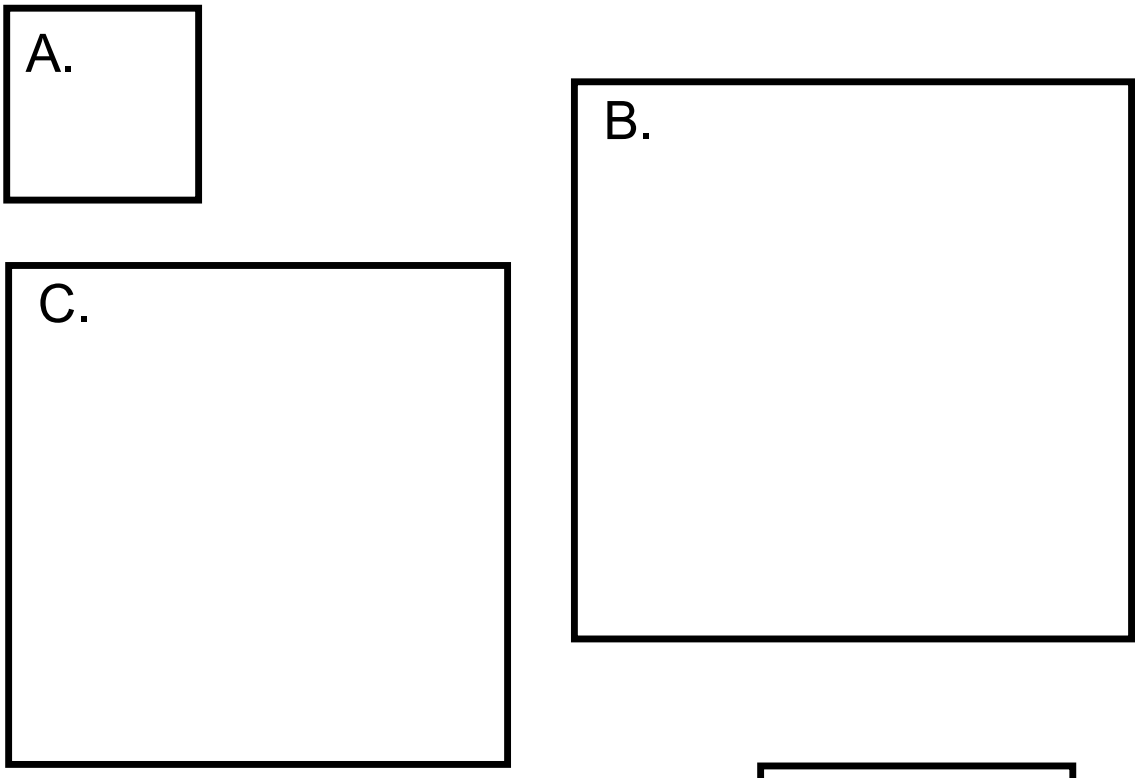
#13A

Kenny, D. A., Archambault, F. X., Jr., & Hallmark, B. W. (1995). *The effects of group composition on gifted and non-gifted elementary students in cooperative learning groups* (Research Monograph 95116). University of Connecticut, The National Research Center on the Gifted and Talented. https://nrcgt.uconn.edu/wp-content/uploads/sites/953/2015/04/rm95116.pdf

Square Area and Perimeter

Color Group _____

Use your ruler to measure the **length** and **with** of the squares below. Find the **area** and **perimeter** of each square. Take your measurements in centimeters and write your answers in square centimeters and centimeters. Write your answers on the lines at the bottom of the page.



A. area = _____ perimeter = _____

B. area = _____ perimeter = _____

C. area = _____ perimeter = _____

D. area = _____ perimeter = _____

#13B

Kenny, D. A., Archambault, F. X., Jr., & Hallmark, B. W. (1995). *The effects of group composition on gifted and non-gifted elementary students in cooperative learning groups* (Research Monograph 95116). University of Connecticut, The National Research Center on the Gifted and Talented. https://nrcgt.uconn.edu/wp-content/uploads/sites/953/2015/04/rm95116.pdf

Desk Plan

This plan shows what a desk could look like from above. Each square in the desk plan is equal to one square centimeter. Using the items on the desk, answer the questions on the next page.

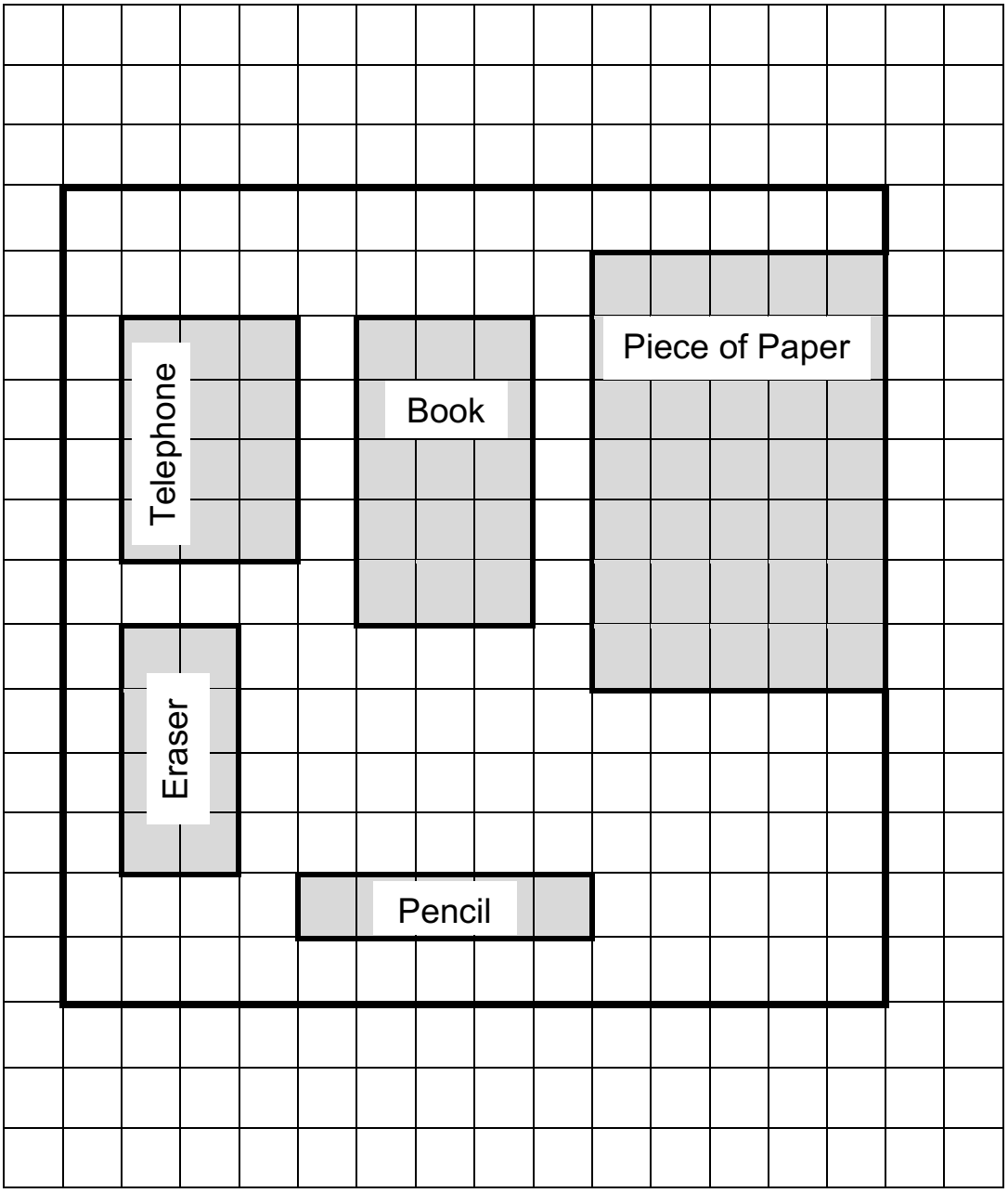
PIECE OF PAPER - 5 cm x 7 cm

TELEPHONE - 4 cm x 3 cm

BOOK - 3 cm x 5 cm

ERASER - 4 cm x 2 cm

PENCIL - 5 cm x 1 cm



#14A

Kenny, D. A., Archambault, F. X., Jr., & Hallmark, B. W. (1995). *The effects of group composition on gifted and non-gifted elementary students in cooperative learning groups* (Research Monograph 95116). University of Connecticut, The National Research Center on the Gifted and Talented. https://nrcgt.uconn.edu/wp-content/uploads/sites/953/2015/04/rm95116.pdf

Desk Plan

Color Group _____

1. What is the length of the desk?

   _____

2. What is the width of the desk?

   _____

3. How many square centimeters is the desk?

   _____

4. How many square centimeters does each item below cover?

   PAPER _____ TELEPHONE _____ BOOK _____

   ERASER _____ PENCIL _____

5. How many square centimeters will all five items cover?

   _____

6. How many square centimeters will be left on the desk after each item is placed?

   _____

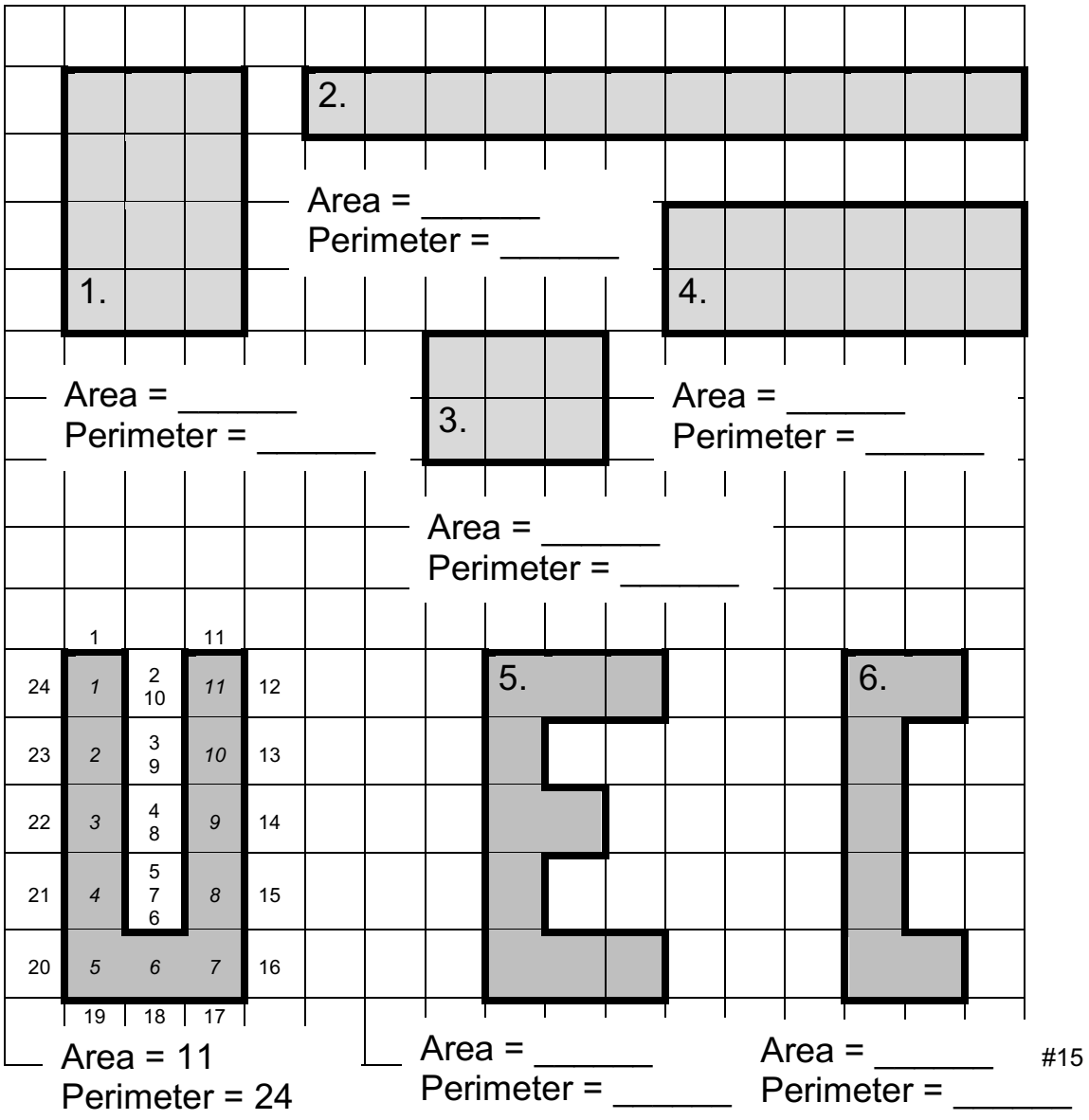
#14B

Kenny, D. A., Archambault, F. X., Jr., & Hallmark, B. W. (1995). *The effects of group composition on gifted and non-gifted elementary students in cooperative learning groups* (Research Monograph 95116). University of Connecticut, The National Research Center on the Gifted and Talented. https://nrcgt.uconn.edu/wp-content/uploads/sites/953/2015/04/rm95116.pdf

Area and Perimeter

Color Group _____

Find the **area** and **perimeter** of each of the rectangles and figures below. Answer the questions at the bottom of the page when you are finished.



#15

7. Are the **area** and the **Perimeter** of a shape always the same? _____

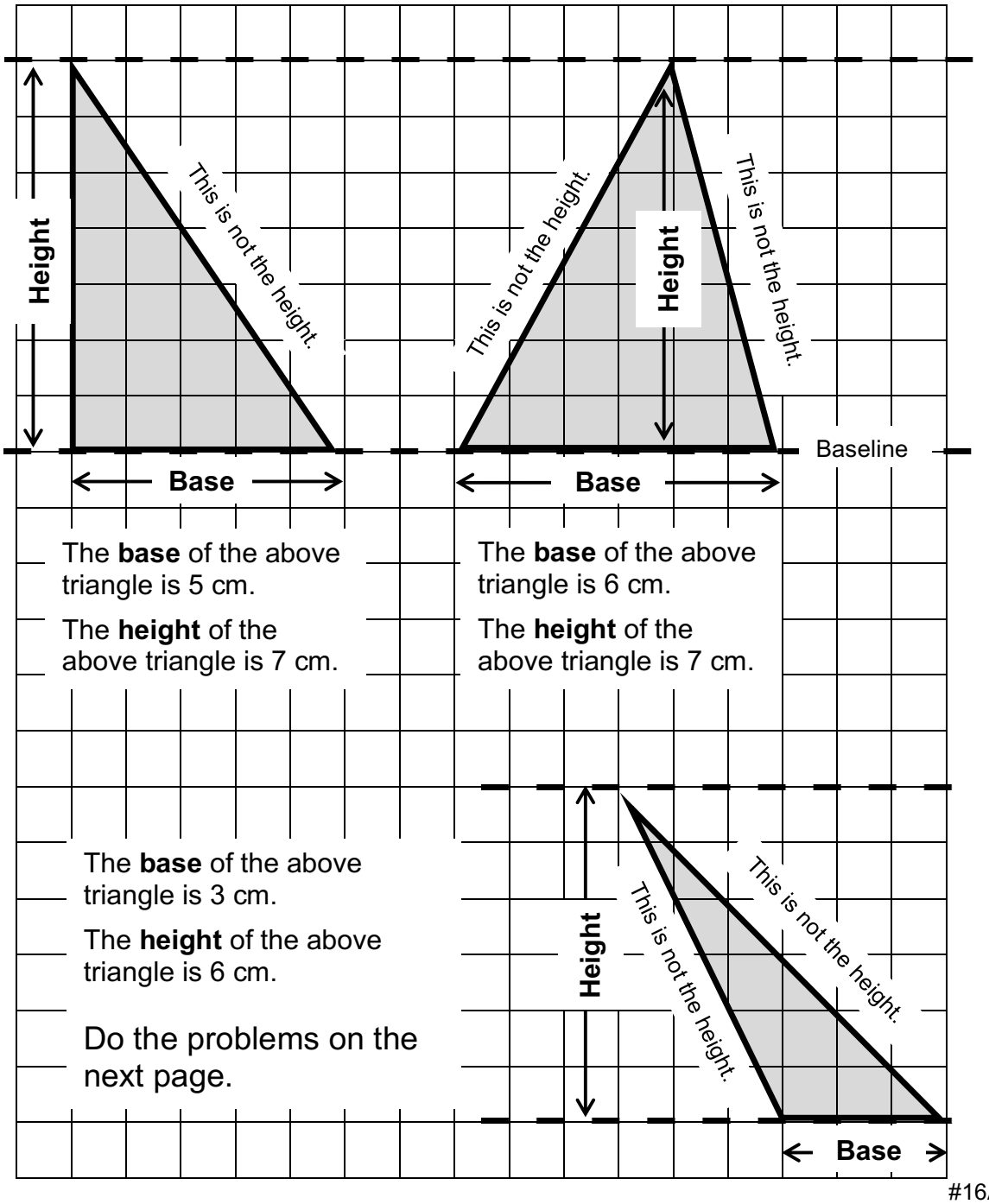
8. Do rectangles which have the same **area** always have the same **perimeter**? _____

Kenny, D. A., Archambault, F. X., Jr., & Hallmark, B. W. (1995). *The effects of group composition on gifted and non-gifted elementary students in cooperative learning groups* (Research Monograph 95116). University of Connecticut, The National Research Center on the Gifted and Talented. https://nrcgt.uconn.edu/wp-content/uploads/sites/953/2015/04/rm95116.pdf

Triangle Height and Base

Color Group _____

The width of a triangle is called the **base**. The **height** if a triangle is the distance straight up from the baseline to the top of the triangle.



The **base** of the above triangle is 5 cm.

The **height** of the above triangle is 7 cm.

The **base** of the above triangle is 6 cm.

The **height** of the above triangle is 7 cm.

The **base** of the above triangle is 3 cm.

The **height** of the above triangle is 6 cm.

Do the problems on the next page.

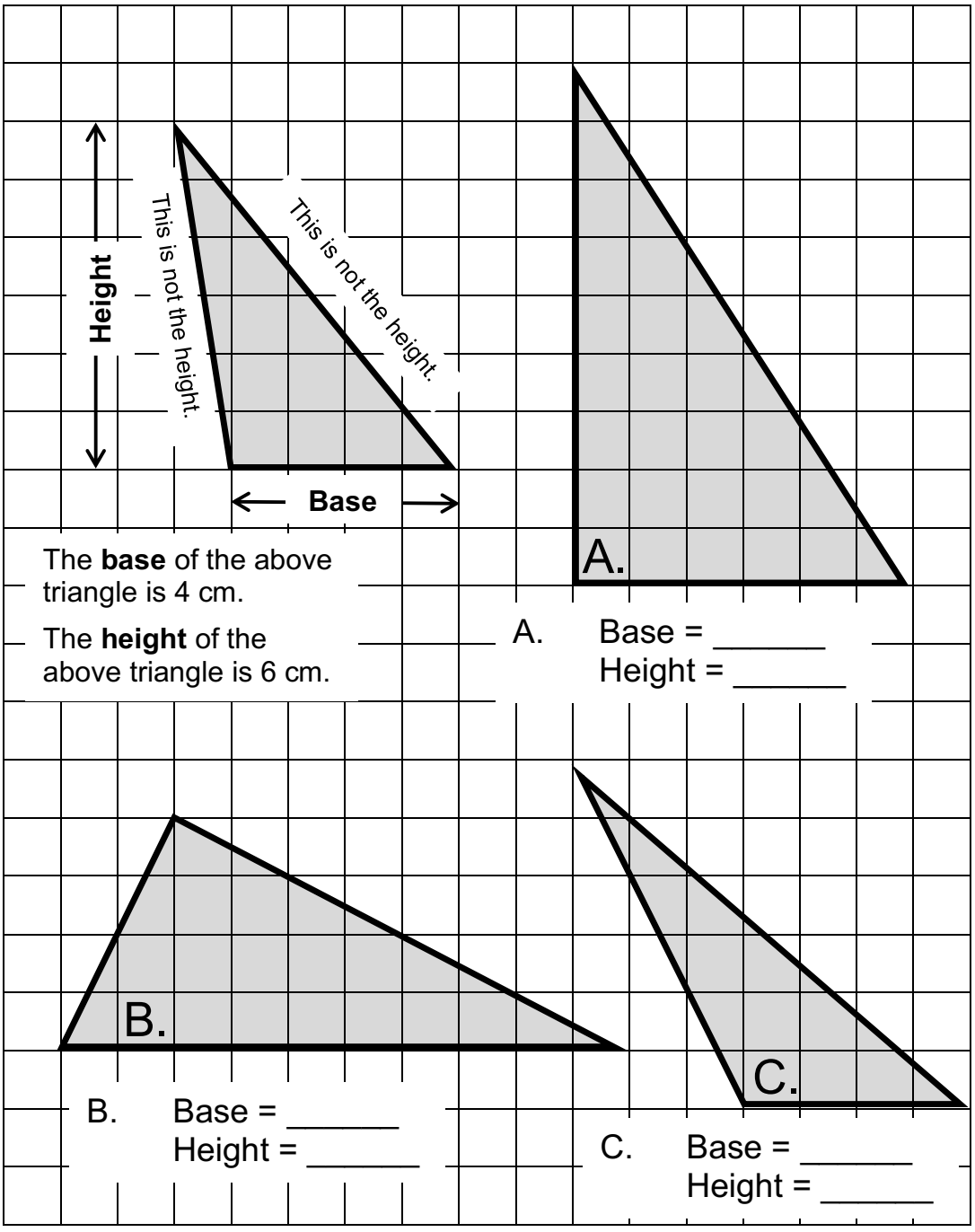
#16A

Kenny, D. A., Archambault, F. X., Jr., & Hallmark, B. W. (1995). *The effects of group composition on gifted and non-gifted elementary students in cooperative learning groups* (Research Monograph 95116). University of Connecticut, The National Research Center on the Gifted and Talented. https://nrcgt.uconn.edu/wp-content/uploads/sites/953/2015/04/rm95116.pdf

Finding Height and Base

Color Group _____

Find the **base** and **height** of each of the triangles below. The first triangle has been completed for you.



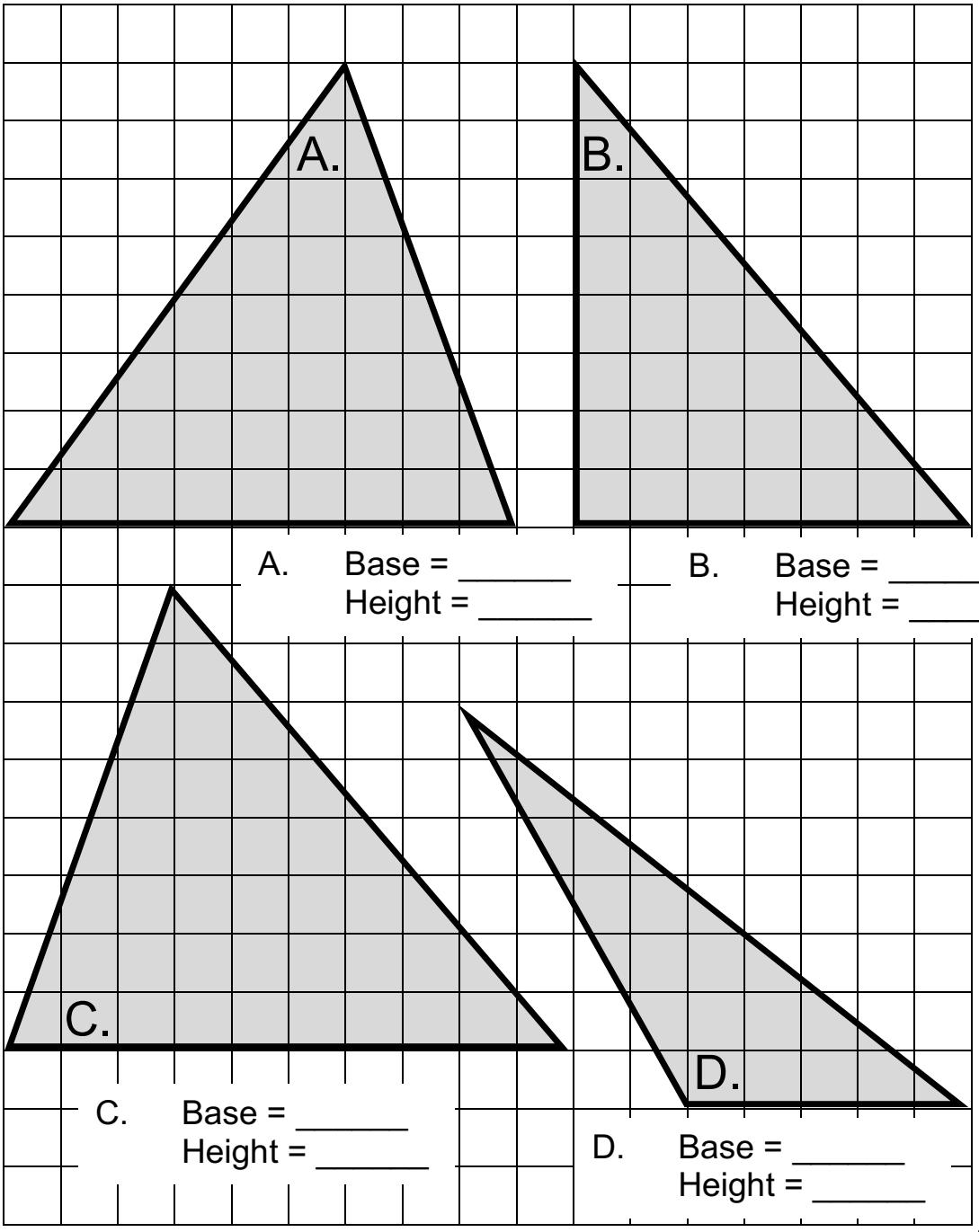
#16B

Kenny, D. A., Archambault, F. X., Jr., & Hallmark, B. W. (1995). *The effects of group composition on gifted and non-gifted elementary students in cooperative learning groups* (Research Monograph 95116). University of Connecticut, The National Research Center on the Gifted and Talented. https://nrcgt.uconn.edu/wp-content/uploads/sites/953/2015/04/rm95116.pdf

Practice Finding Height and Base

Color Group _____

Find the **base** and **height** of each of the triangles below.



#17

Kenny, D. A., Archambault, F. X., Jr., & Hallmark, B. W. (1995). *The effects of group composition on gifted and non-gifted elementary students in cooperative learning groups* (Research Monograph 95116). University of Connecticut, The National Research Center on the Gifted and Talented. https://nrcgt.uconn.edu/wp-content/uploads/sites/953/2015/04/rm95116.pdf

One-Half

Color Group _____

One-half of 2 is 1.

One-half of 6 is 3.

On-half of 24 is 12.

A. What is one-half of 4?

B. What is one-half of 8?

C. What is one-half of 40?

D. What is one-half of 22?

E. What is one-half of 64?

F. What is one-half of 36?

G. What is one-half of 50?

H. What is one-half of 72?

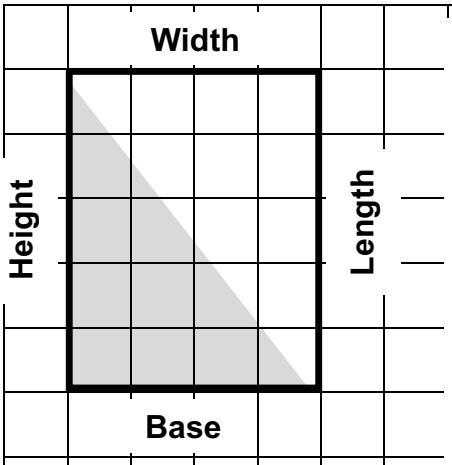
#18

Kenny, D. A., Archambault, F. X., Jr., & Hallmark, B. W. (1995). *The effects of group composition on gifted and non-gifted elementary students in cooperative learning groups* (Research Monograph 95116). University of Connecticut, The National Research Center on the Gifted and Talented. https://nrcgt.uconn.edu/wp-content/uploads/sites/953/2015/04/rm95116.pdf

Triangle Areas

Color Group _____

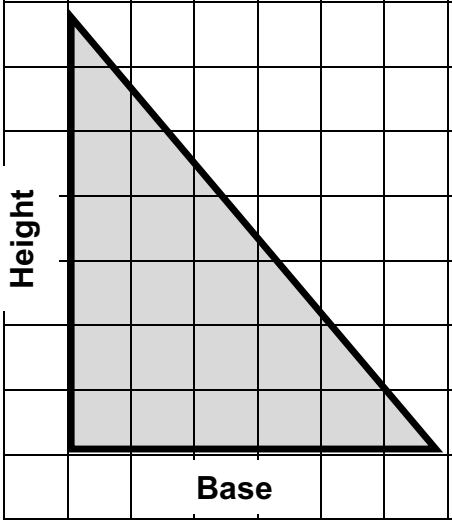
You learned that the **area** of rectangle is found by multiplying the **length** by the **width**. The **length** of the rectangle below is 5 centimeters. The **width** of the rectangle is 4 centimeters. The **area** of the rectangle is 20 square centimeters.



You learned that the width of a triangle is called the **base** and the **height** of a triangle is the distance straight up from the line where the base is to the top of the triangle.

The triangle at the left covers one-half of the rectangle. The **area** if this triangle is 10 square centimeters because one-half of 20 is 10.

The **area** of triangle is found by multiplying the **base** by the **height** and finding **one-half** of that answer.



The **base** of this triangle is 6 cm.

The **height** of this triangle is 7 cm.

6 X 7 = 42

Area = one half of (base x height)

One-half of 42 is 21

The **area** of the triangle is 21 sq. cm.

(Go to the next page)

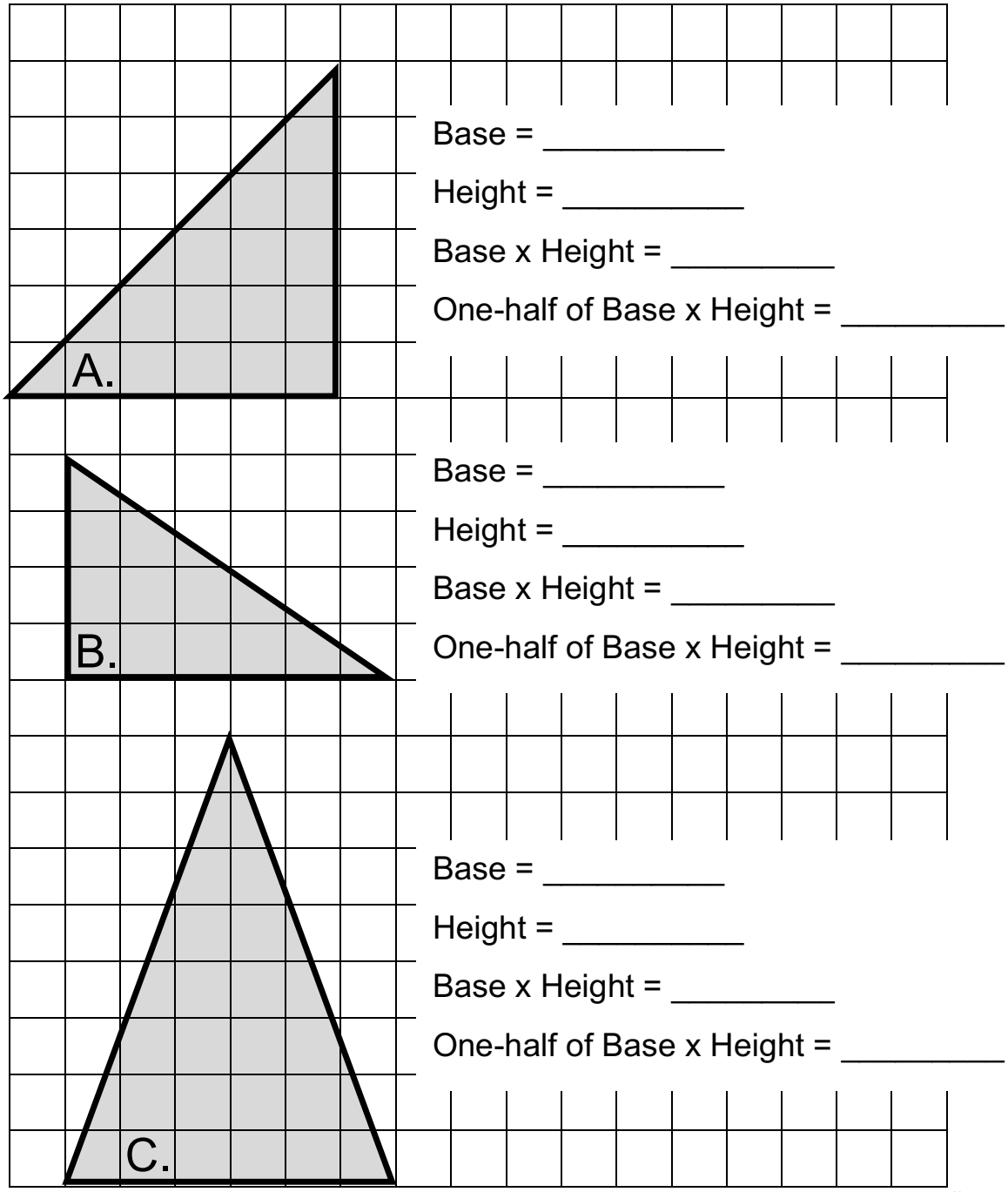
#19A

Kenny, D. A., Archambault, F. X., Jr., & Hallmark, B. W. (1995). *The effects of group composition on gifted and non-gifted elementary students in cooperative learning groups* (Research Monograph 95116). University of Connecticut, The National Research Center on the Gifted and Talented. https://nrcgt.uconn.edu/wp-content/uploads/sites/953/2015/04/rm95116.pdf

Triangle Areas

Color Group _____

Find the **area** of each of the rectangles below.



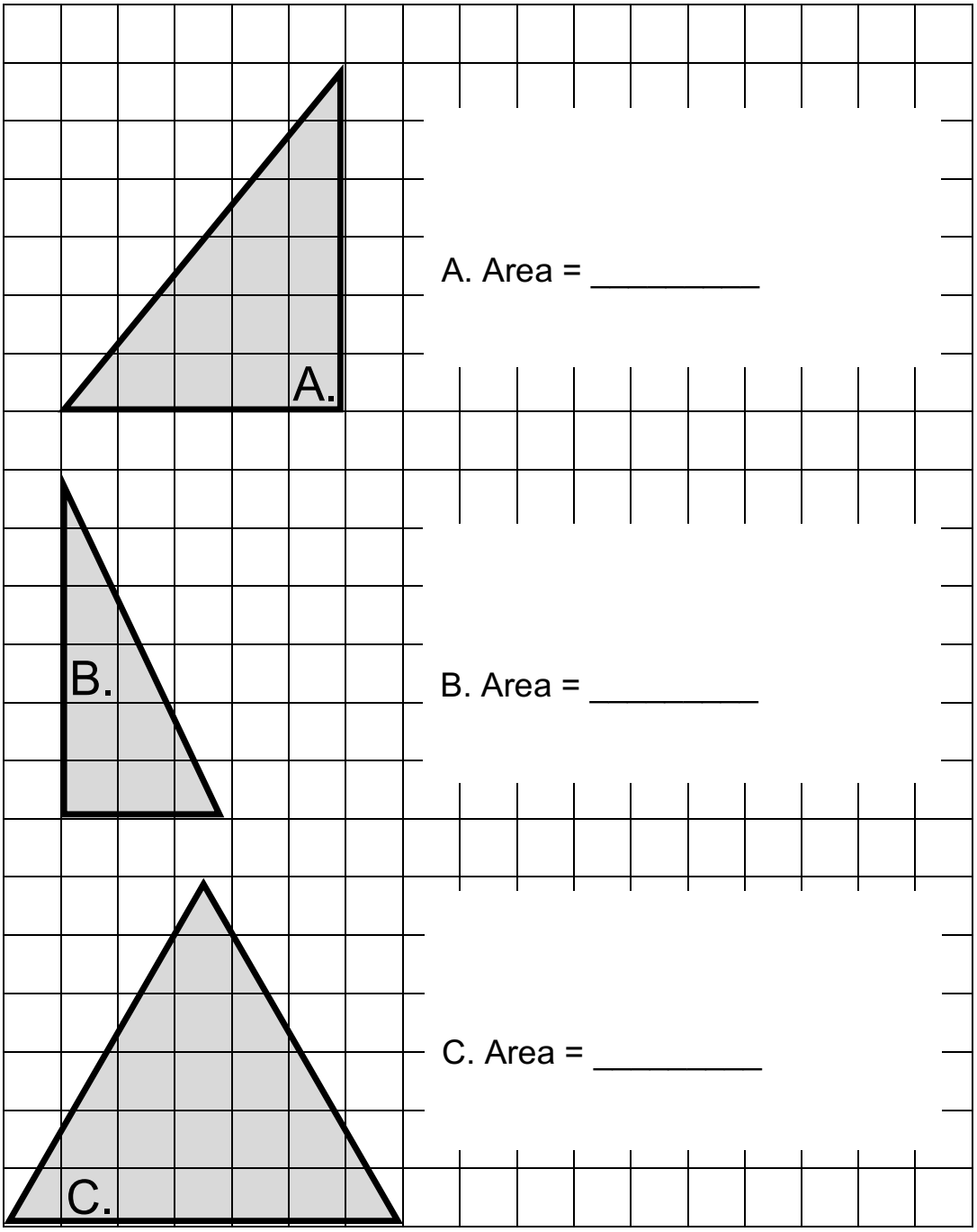
#19B

Kenny, D. A., Archambault, F. X., Jr., & Hallmark, B. W. (1995). *The effects of group composition on gifted and non-gifted elementary students in cooperative learning groups* (Research Monograph 95116). University of Connecticut, The National Research Center on the Gifted and Talented. https://nrcgt.uconn.edu/wp-content/uploads/sites/953/2015/04/rm95116.pdf

More Triangle Areas

Color Group _____

Find the **area** of each of the rectangles below.



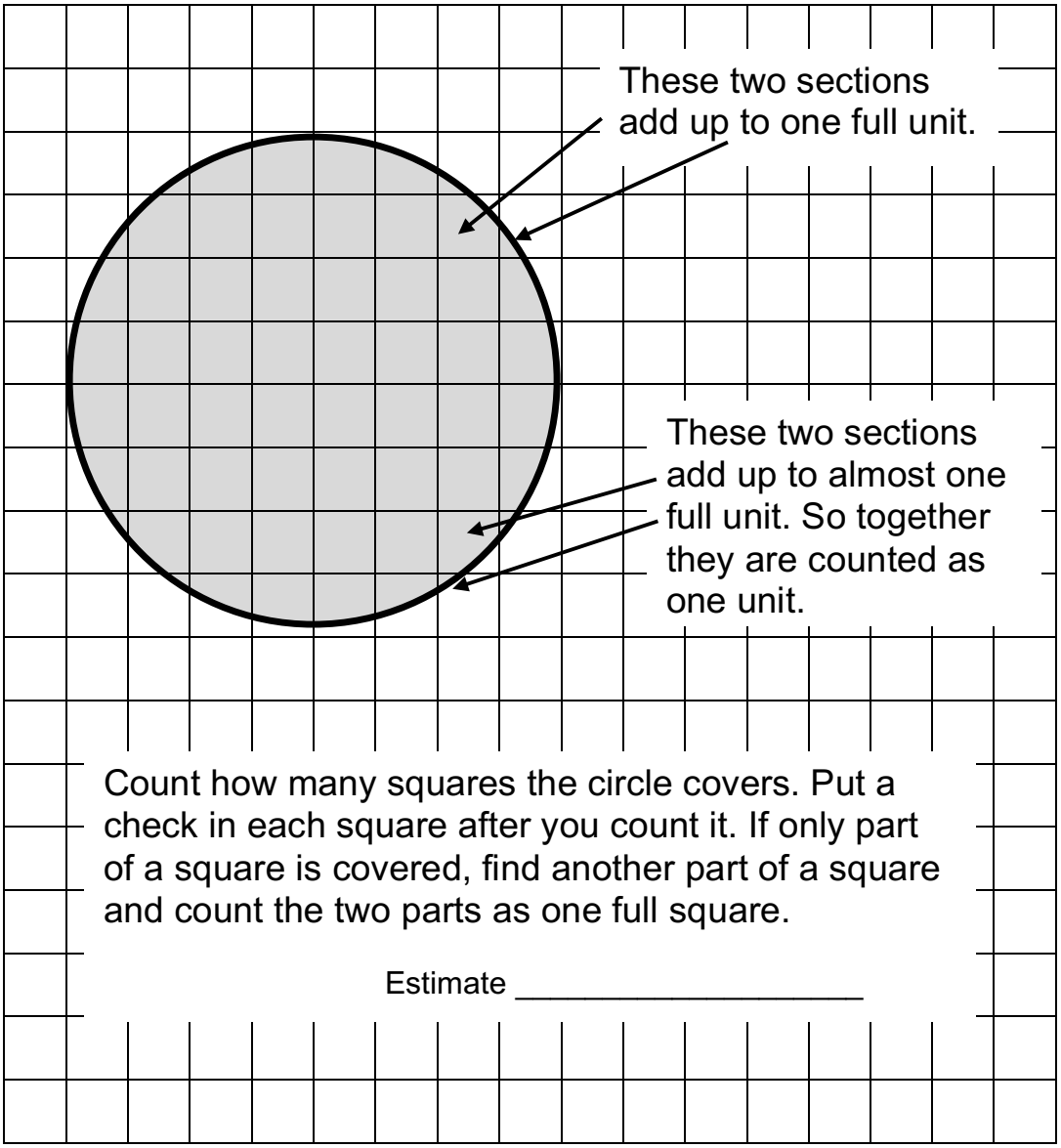
#20

Kenny, D. A., Archambault, F. X., Jr., & Hallmark, B. W. (1995). *The effects of group composition on gifted and non-gifted elementary students in cooperative learning groups* (Research Monograph 95116). University of Connecticut, The National Research Center on the Gifted and Talented. https://nrcgt.uconn.edu/wp-content/uploads/sites/953/2015/04/rm95116.pdf

Estimating Circle Area

Color Group _____

The **area** of an object is the number of square units it covers. As you already learned, one way to find the **area** is to count the number of square units the object covers. Sometimes an object covers only part of a square unit. When this happens, you need to find another part of a square unit that is covered and count the two units as one.



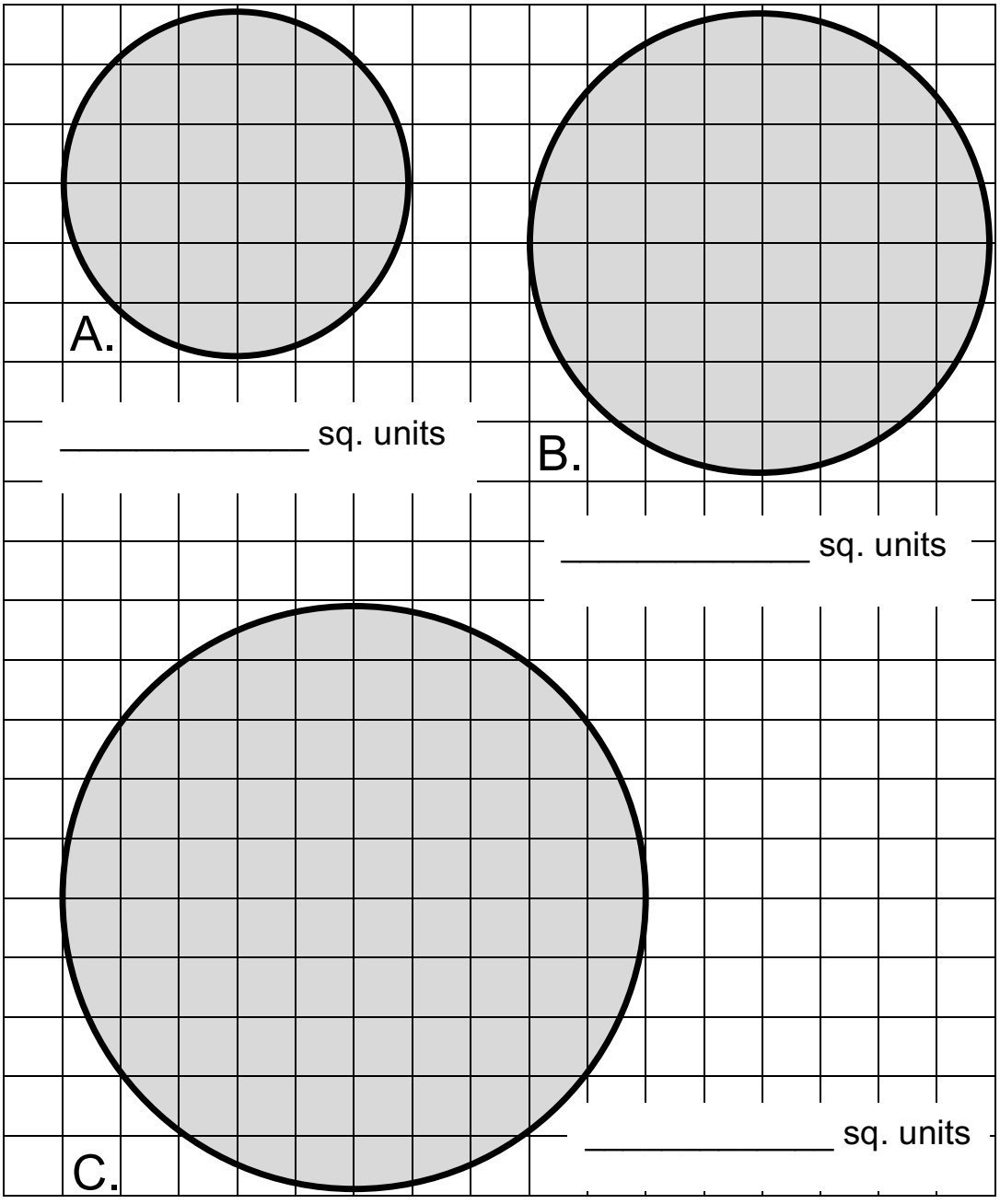
#21

Kenny, D. A., Archambault, F. X., Jr., & Hallmark, B. W. (1995). *The effects of group composition on gifted and non-gifted elementary students in cooperative learning groups* (Research Monograph 95116). University of Connecticut, The National Research Center on the Gifted and Talented. https://nrcgt.uconn.edu/wp-content/uploads/sites/953/2015/04/rm95116.pdf

Practicing Circle Area

Color Group _____

Count how many squares the circles below cover. Put a check in each square after you count it. If only part of a square is covered, find another part of a square and count the two parts as one full square. Write what you think the **area** is on the lines below each circle.



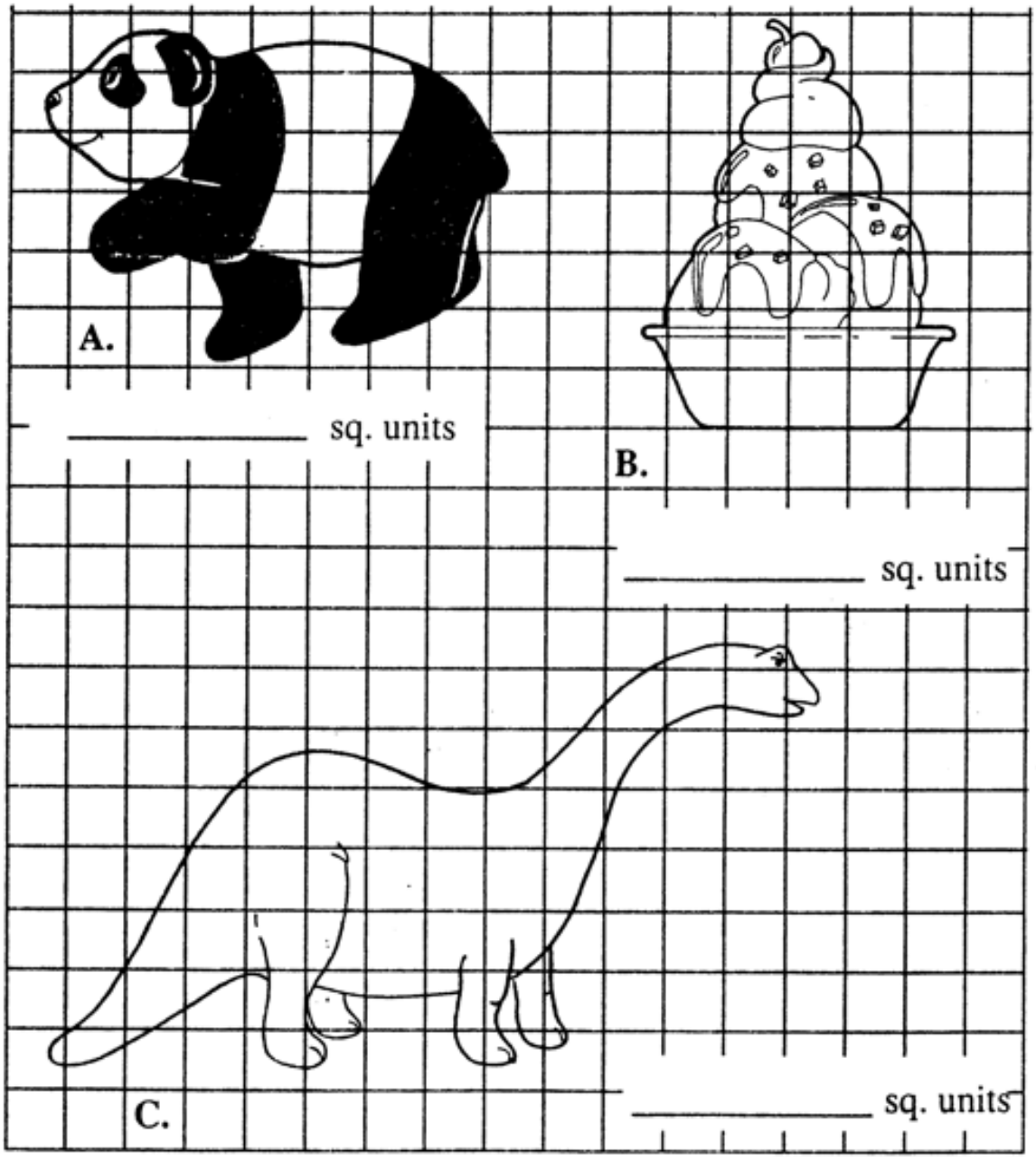
#22

Kenny, D. A., Archambault, F. X., Jr., & Hallmark, B. W. (1995). *The effects of group composition on gifted and non-gifted elementary students in cooperative learning groups* (Research Monograph 95116). University of Connecticut, The National Research Center on the Gifted and Talented. https://nrcgt.uconn.edu/wp-content/uploads/sites/953/2015/04/rm95116.pdf

Other Shape Areas

Color Group _____

Count how many squares the shapes below cover. Put a check in each square after you count it. If only part of a square is covered, find another part of a square and count the two parts as one full square. Write what you think the **area** is on the lines below each shape.



#23