

If students already know how to find the area have them identify the area of each rectangle.

For example: = 1 unit x 7 units (combine like terms)
 = 1 x 7 x units x units
 = 7 units squared

We Do:

Follow the same procedure using 18 units as the perimeter. As a class, find the different rectangles using the pattern by starting with 1 unit as shown below. Draw them on the graph paper, label all sides, and show the perimeter in units and the area in square units of each rectangle.



You Do: Cooperative Practice (Working with A Partner)

Give each pair of students a perimeter to work with (shown below) along with how many different rectangles can be made with that perimeter. (write on post-it note or index card) They find their pattern, draw each rectangle on graph paper, label each side of the rectangle, and show the perimeter in units and area in square units of each rectangle.

Perimeters: multiple students can have the same perimeter

- | | |
|--------------------------------|---------------------------------|
| 16 & 18 each have 4 rectangles | 32 & 34 each have 8 rectangles |
| 20 & 22 each have 5 rectangles | 36 & 38 each have 9 rectangles |
| 24 & 26 each have 6 rectangles | 40 & 42 each have 10 rectangles |
| 28 & 30 each have 7 rectangles | 44 & 46 each have 11 rectangles |

Explore: *Think, Pair, Share*

What do you notice about the perimeter with your rectangles?

How does the perimeter change?

Do you recognize a pattern?

What did you notice about the area in relation to the perimeter?

Extended the Activity

Allow students to pick a number of their own to use as a perimeter for the activity.

AND/OR Have students write a perimeter question for each of the rectangles they drew.

AND/OR Have students share rectangles with classmates.

California State Standards

3MG 1.2 Estimate or determine the areas and volume of solid figures by covering them with squares or by counting the number of cubes that would fill them.

3MG 1.3 Find the perimeter of a polygon with integer sides.

4M.G. 1.0: Students understand perimeter and area.

California Common Core State Standards

3.MD: Geometric measurement: understand concepts of area and relate area to multiplication and to addition.

3.MD.5. Recognize area as an attribute of plane figures and understand concepts of area measurement.

3.MD.8: Solve real world and mathematical problems involving perimeters of polygons, including finding the perimeter given the side lengths, finding an unknown side length, and exhibiting rectangles with the same perimeter and different areas or with the same area and different perimeters

4.MD.3: Apply the area and perimeter formulas for rectangles in real world and mathematical problems.

Warm-Up

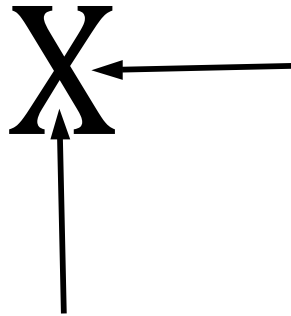
CST #21: 3NS2.1

$$9,000 - 3,782 =$$

- A) 5,218
- B) 5,328
- C) 6,782
- D) 12,782

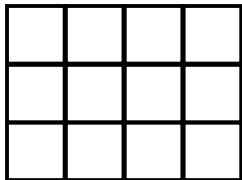
Review

Identify each angle as acute, isosceles, or obtuse.



Current

Identify the area and perimeter for the rectangles below.



Other

Round 545 to the nearest 10.

Round 545 to the nearest 100.