Unit 7, Lesson 13

Perimeter and Area of Rectangles

Let's explore the perimeter and area of rectangles on the coordinate grid.

Warm-up

Estimation Exploration: Window Washing

What is the area of 1 window?

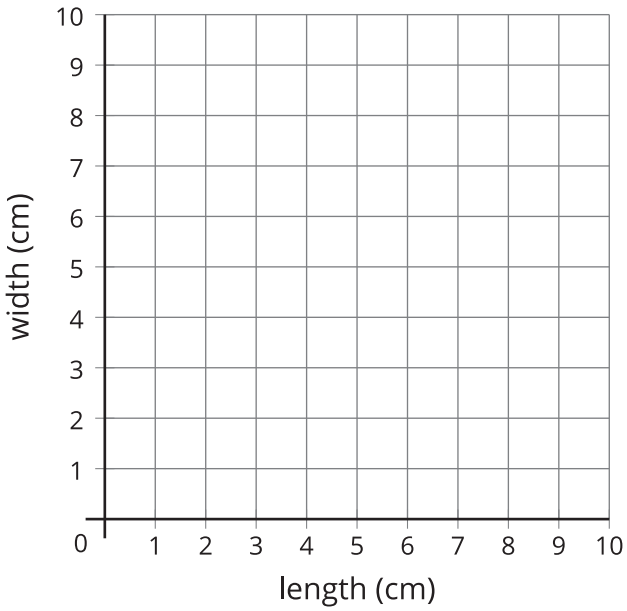
Record an estimate that is:

too low	about right	too high

Activity 1

Rectangle Perimeters

length (cm)	width (cm)



1. Jada draws a rectangle with a perimeter of 12 centimeters. What could be the length and width of the rectangle if all the side lengths are whole numbers? Use the table to record 5 possible answers.

2. Represent the length and width of each rectangle as a point on the coordinate grid.

3. If Jada draws a square, how long and wide will it be?

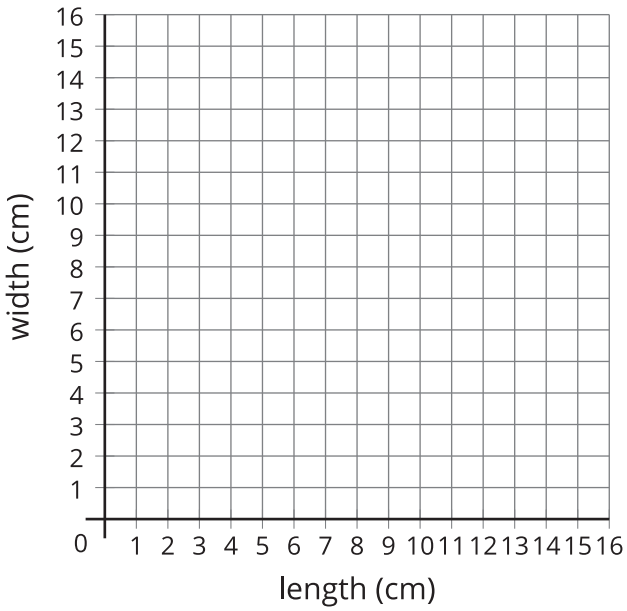
4. If Jada's rectangle is 2.5 cm long, how wide is it? Represent this rectangle as a point on the coordinate grid.

5. If Jada's rectangle is 3.25 cm long, how wide is it? Represent this rectangle as a point on the coordinate grid.

Activity 2

Rectangle Areas

length (cm)	width (cm)



1. Jada draws a rectangle with an area of 16 square centimeters. What could be the length and width of the rectangle if all the side lengths are whole numbers? Use the table to record 5 possible answers.

2. Represent the length and width of each rectangle as a point on the coordinate grid.

3. If Jada's rectangle is 5 cm long, how wide is it? Represent this rectangle as a point on the coordinate grid.

4. If Jada's rectangle is 3 cm long, how wide is it? Represent this rectangle as a point on the coordinate grid.

5. If Jada draws a square, how long and wide is it? Explain how you know.

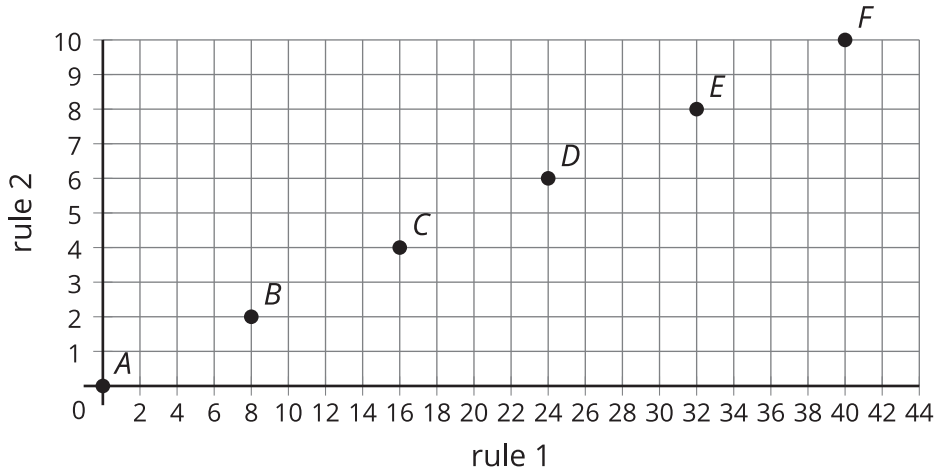
Section C Summary

We generated patterns and analyzed relationships between two different patterns.

Example: Both patterns start with 0.

	A	*B*	*C*	*D*	*E*	*F*
rule 1: Add 8.	0	8	16	24	32	40
rule 2: Add 2.	0	2	4	6	8	10

Each number in Rule 1's pattern is 4 times the value of the corresponding number in Rule 2's pattern. Each number in Rule 2's pattern is $\frac{1}{4}$ times the value of the corresponding number in Rule 1's pattern. We represented 2 patterns together as points on a coordinate grid.



We also used points on a coordinate grid to represent other situations, such as the length and width of rectangles with a given area or perimeter.