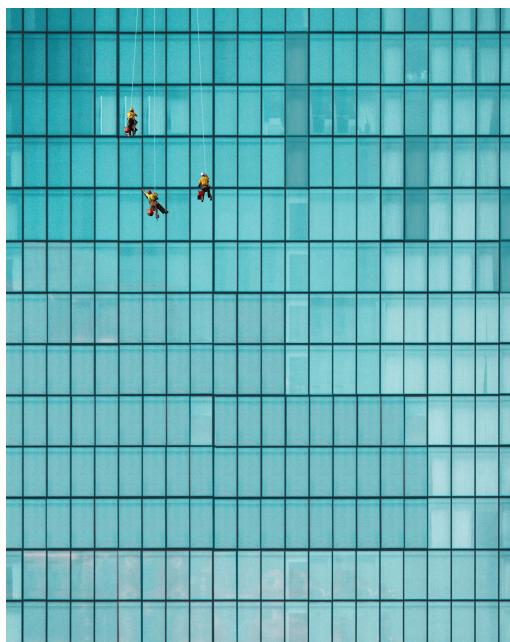# Lesson 13: Perimeter and Area of Rectangles

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

Warm-up: Estimation Exploration: Window Washing
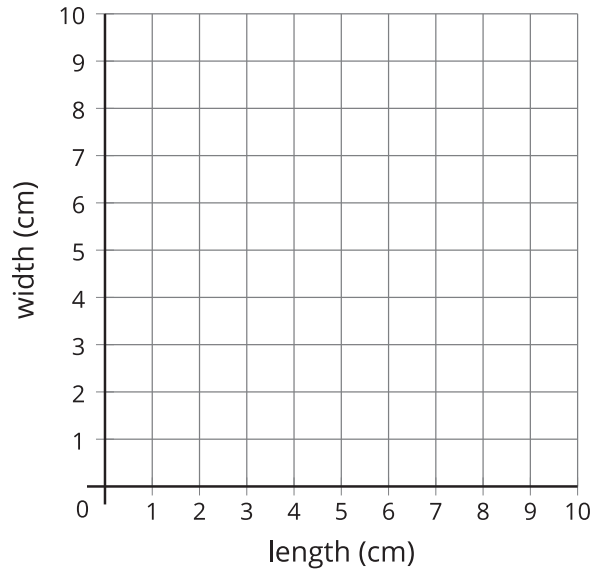
What is the area of one window?

Record an estimate that is:

too low	about right	too high

13.1: Rectangle Perimeters

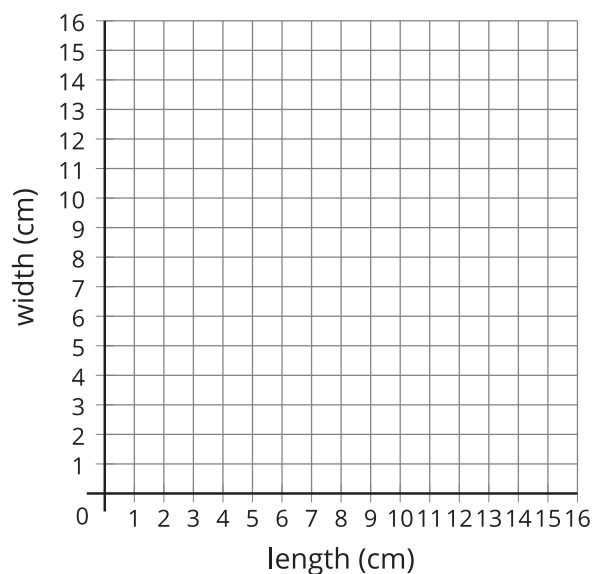| length (cm)	width (cm)

1. Jada drew a rectangle with a perimeter of 12 centimeters. What could the length and width of Jada's rectangle be? Use the table to record your answer.

2. Plot the length and width of each rectangle on the coordinate grid.

3. If Jada drew a square, how long and wide was it?

4. If Jada's rectangle was 2.5 cm long, how wide was it? Plot this point on the coordinate grid.

5. If Jada's rectangle was 3.25 cm long, how wide was it? Plot this point on the coordinate grid.

13.2: Rectangle Areas

length (cm)	width (cm)

1. Jada drew a rectangle with area 16 square centimeters. What could the length and width of Jada's rectangle be? Use the table to record your answer.

2. Plot the length and width of each rectangle on the coordinate grid.

3. If Jada's rectangle was 5 cm long, how wide was it? Plot this point on the coordinate grid.

4. If Jada's rectangle was 3 cm long, how wide was it? Plot this point on the coordinate grid.

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

Section Summary

Section Summary
In this section, we generated patterns and recognized relationships between two different patterns.

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

Each number in rule 1 is 4 times the value of the corresponding number in rule 2 and each number in rule 2 is $\frac{1}{4}$ times the value of the corresponding number in rule 1. We also plotted the rules together on a coordinate grid.
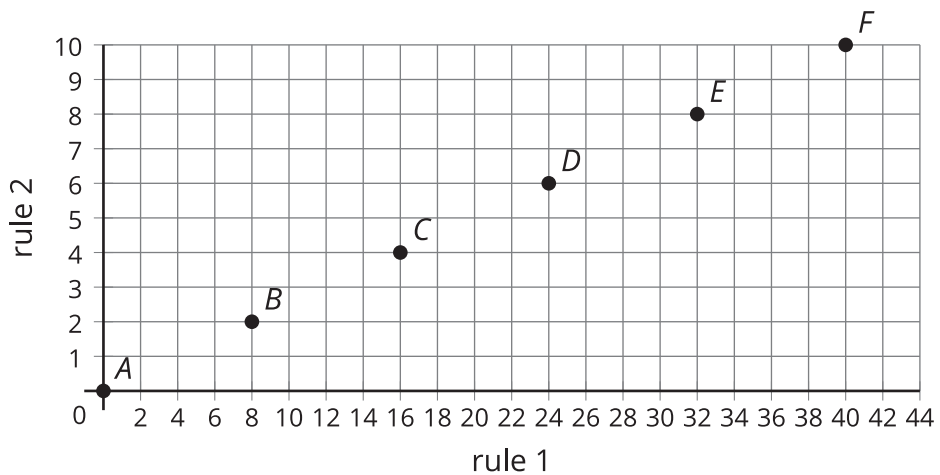
We also used the coordinate plane to represent other situations such as the length and width of rectangles with given area or perimeter.