Name _____ Date _____ Period _____

LESSON 7-7 · WARM-UP

Warm-Up Practice

Represent Polygons on the Coordinate Plane

THE MOVE

what this page practices

Find a side length from two vertices, then add the sides for perimeter

Two vertices with the same y-value form a horizontal side: subtract the x-values and take the absolute value. The same x-value means a vertical side. Add all of the side lengths to get the perimeter.

Find the area from those side lengths

Rectangle: area = length × width. Triangle: area = 1/2 × base × height. Area is measured in square units.

WORKED MODEL

we do this one together

Step 1	A rectangle has vertices (1, 1), (5, 1), (5, 4), (1, 4).
Step 2	Bottom side: $\|5 - 1\| = 4$ units. Left side: $\|4 - 1\|$ = _____ units.
Step 3	Perimeter = 4 + 3 + 4 + 3 = _____ units.
Step 4	Area = 4 × 3 = _____ square units.

YOUR TURN

8 items · about 10 minutes

1. A rectangle has vertices (2, 1), (7, 1), (7, 4), (2, 4). How long is the bottom side? The left side? _____

ANSWER _____

2. A rectangle has sides 5, 3, 5, and 3 units. Perimeter = _____ units. Area = _____ square units.

ANSWER _____

3. A rectangle has vertices (−3, 2), (1, 2), (1, 5), (−3, 5). What is its perimeter? _____

ANSWER _____

4. A rectangle has vertices (−5, −1), (−1, −1), (−1, 4), (−5, 4). What is its area? _____

ANSWER _____

5. A square has vertices (0, 0), (6, 0), (6, 6), (0, 6). Perimeter = _____ units. Area = _____ square units.

ANSWER _____

6. A triangle has vertices (2, 1), (8, 1), (2, 5). Its base is 6 units and its height is 4 units. What is its area? _____

ANSWER _____

7. One side of a rectangle runs from (−2, 3) to (−2, −1). The perimeter is 18 units. How long is each of the other two sides? _____

ANSWER _____

8. A garden has corners at (−4, −2), (3, −2), (3, 2), (−4, 2) on a grid where 1 unit is 1 meter. Find its perimeter and its area. _____

ANSWER _____