

Name: _____

Practice & Problem Solving



Leveled Practice In 7 and 8, find the perimeter of each rectangle.

7. Rectangle $JKLM$: $J(-3, 8)$, $K(-3, -1)$, $L(4, -1)$, $M(4, 8)$

$$JK = |8| + |-1| = \square$$

$$KL = |-3| + |4| = \square$$

$$\text{Perimeter} = \square \text{ units}$$

8. Rectangle $WXYZ$: $W(-3, -2)$, $X(4, -2)$, $Y(4, -5)$, $Z(-3, -5)$

$$WX = |-3| + |4| = \square$$

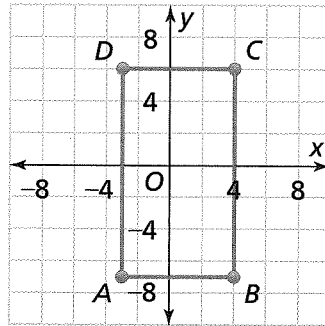
$$XY = |-5| - |-2| = \square$$

$$\text{Perimeter} = \square \text{ units}$$

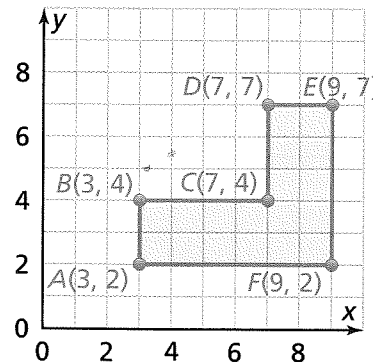
9. Triangle JKL has vertices $J(0, 0)$, $K(5, 0)$, and $L(0, -3)$. Is triangle JKL equilateral? Justify your answer.

10. Polygon $WXYZ$ has vertices $W(-1.5, 1.5)$, $X(6, 1.5)$, $Y(6, -4.5)$, and $Z(-1.5, -4.5)$. Is $WXYZ$ a rectangle? Justify your answer.

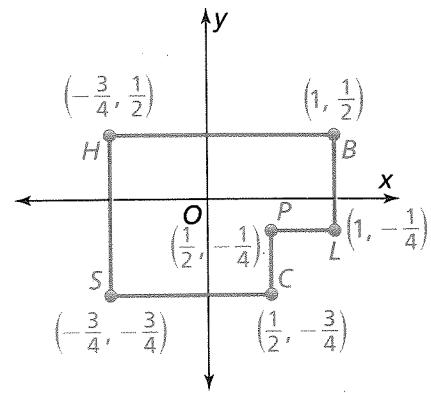
11. What are the perimeter and area of rectangle $ABCD$?



12. Mike used a coordinate plane to design the patio shown at the right. Each unit on the grid represents 1 yard. To buy materials to build the patio, Mike needs to know its perimeter. What is the perimeter of the patio?



13. Jordan started at her home at point H . She ran to the bank (B), the library (L), the post office (P), the café (C), her school (S), and then back to her home, as shown. The coordinates represent the position, in miles, of each of these locations with respect to the center of town, which is located at the origin. What is the total distance that Jordan ran?



14. **Use Structure** Ana drew a plan for a rectangular piece of material that she will use for a quilt. The vertices are $(-1.2, -3.5)$, $(-1.2, 4.4)$, and $(5.5, 4.4)$. What are the coordinates of the fourth vertex?

15. Mr. Janas is building a pool in his backyard. He sketches the rectangular pool on a coordinate plane. The vertices of the pool are $A(-5, 7)$, $B(1, 7)$, $C(1, -1)$, and $D(-5, -1)$. If each unit represents 1 yard, how much area of the backyard is needed for the pool?

16. **Vocabulary** Why is absolute value used to find distances on a coordinate plane?

17. **Higher Order Thinking** A square on a coordinate plane has one vertex at $(-0.5, -2)$ and a perimeter of 10 units. If all of the vertices are located in Quadrant III, what are the coordinates of the other three vertices?

Assessment Practice

18. The coordinates of $\triangle ABC$ are $A(-1\frac{1}{2}, -1\frac{1}{2})$, $B(-1\frac{1}{2}, -3)$, and $C(4, -3)$.

PART A

What is the distance between points A and B ?

PART B

Give the coordinates for two points that are 8 units from point C .

