

7.4

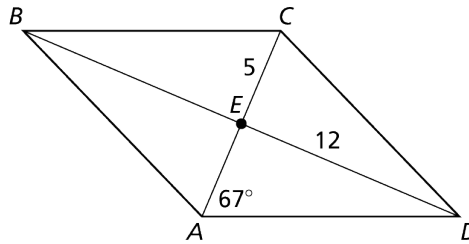
Practice A

Key Points: In a Rhombus, (1) the sides are congruent, (2) the *diagonals are perpendicular*, and (3) the *diagonals bisect the angles*.

In a Rectangle, (1) the angles are 90° , and (2) the diagonals are congruent.

In Exercises 1–5, the diagonals of rhombus $ABCD$ intersect at E . Given that $m\angle EAD = 67^\circ$, $CE = 5$, and $DE = 12$, find the indicated measure.

1. $m\angle AED$
2. $m\angle ADE$
3. $m\angle BAE$
4. AE
5. BE



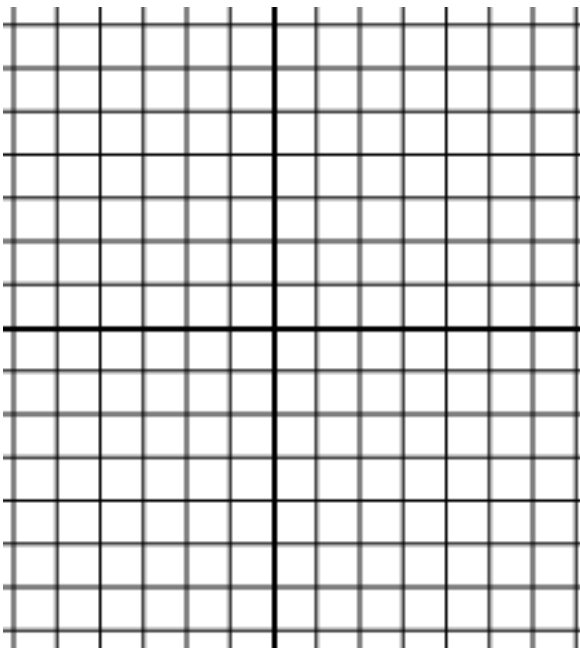
In Exercises 8 and 9, decide whether quadrilateral $WXYZ$ is a Parallelogram, rectangle, a rhombus, or a square. Give all names that apply. Explain your reasoning and show math to justify it.

Begin by finding the slopes and lengths of each side OR find the slopes and lengths of the diagonals (you can justify your answer with either one).

8. $W(3, 1), X(3, -2), Y(-5, -2), Z(-5, 1)$

Slopes an Lengths:

Is it a Parallelogram?



Is it a Rectangle?

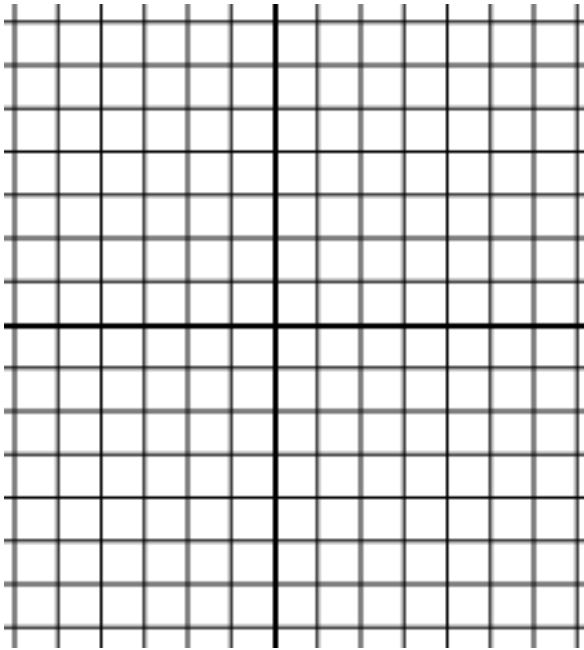
Is it a Rhombus?

Is it a Square?

9. $W(4, 1), X(1, 4), Y(-2, 1), Z(1, -2)$

Slopes and Lengths

Is it a Parallelogram?



Is it a Rectangle?

Is it a Rhombus?

Is it a Square?

11. In the figure, all sides are congruent and all angles are right angles.

a. Determine whether the quadrilateral is a rectangle. Explain your reasoning.

b. Determine whether the quadrilateral is a rhombus. Explain your reasoning.

c. Determine whether the quadrilateral is a square. Explain your reasoning.

d. Find $m\angle AEB$.

e. Find $m\angle EAD$.

