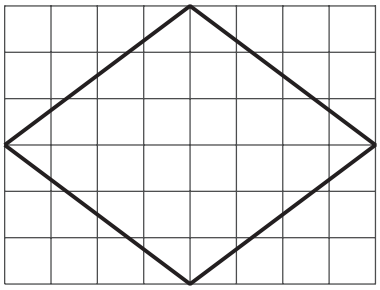
Section B: Practice Problems

1. Determine whether the statement is true or false. Explain or show your reasoning.

   a. The shape is a rectangle.

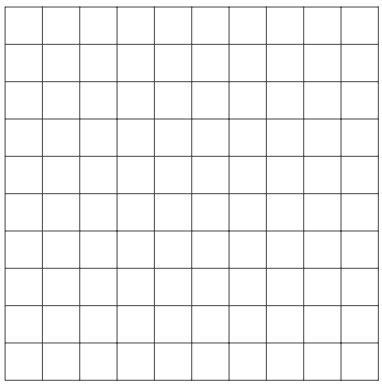


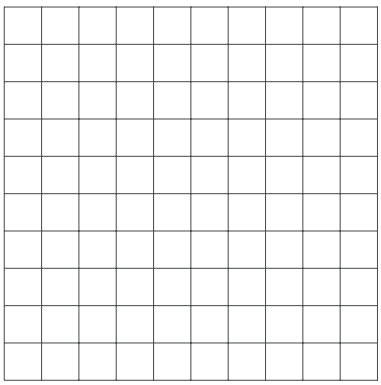
   b. The shape is a square.

   c. The shape is a rhombus.

(From Unit 7, Lesson 4.)

2.





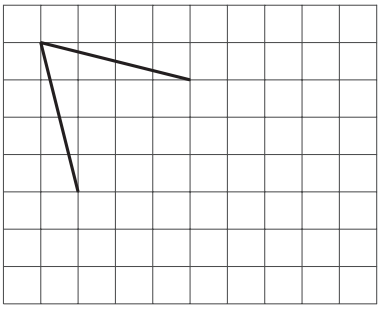
   a. Draw a trapezoid that is also a parallelogram. Explain how you know it is a trapezoid and a parallelogram.

   b. Draw a trapezoid that is not a parallelogram. Explain how you know it is a trapezoid but is not a parallelogram.

(From Unit 7, Lesson 5.)

3. Determine if you can make each given shape so that it contains these two sides. Explain your reasoning.

   a. a square



   b. a rectangle

   c. a rhombus

(From Unit 7, Lesson 6.)

4. Decide if each statement is true or false. Explain or show your reasoning.

   a. A parallelogram is sometimes a rhombus.

   b. A rhombus is always a parallelogram.

   c. A trapezoid is never a rectangle.

   d. A rectangle is never a square.

   e. A parallelogram is always a trapezoid.

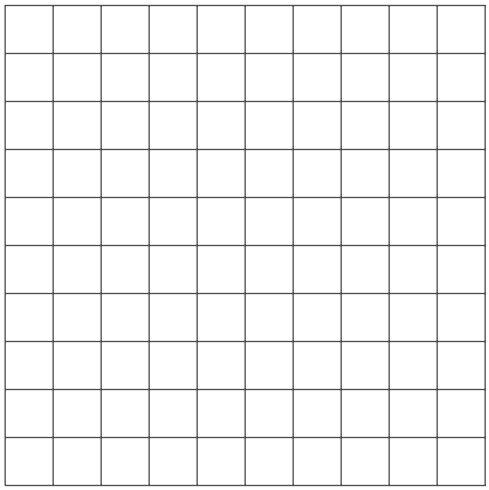
(From Unit 7, Lesson 7.)

5. For each description, draw a **right** triangle with the described side lengths on the grid or explain why there is no such right triangle.

   a. 2 equal side lengths

   b. 3 equal side lengths

   c. 3 different side lengths



(From Unit 7, Lesson 8.)

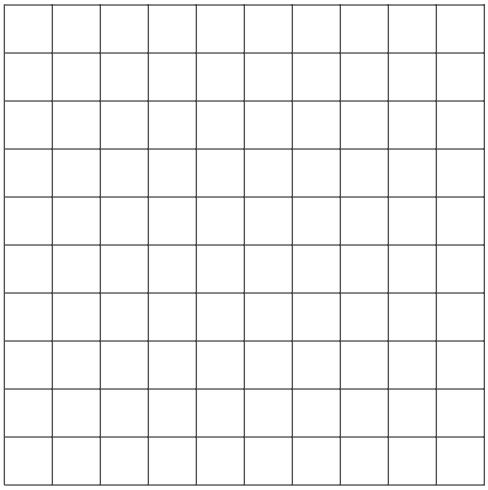
6. **Exploration**

   a. Jada cut a quadrilateral in half, from one vertex to the opposite vertex, and she got two isosceles triangles. What kind of quadrilateral could Jada have cut in half? Explain or show your reasoning.

   b. Elena put together two right triangles to make a quadrilateral. What kind of quadrilateral could Elena have made? Explain or show your reasoning.

7. **Exploration**

a. Can you find a square on the grid that does not have a vertical or horizontal side? Explain or show your reasoning.



b. Draw the line segment from $(4, 4)$ to $(6, 5)$. Can you find a square that contains this segment as one of its sides?