# 1.6a Perimeter and Area

Name _____
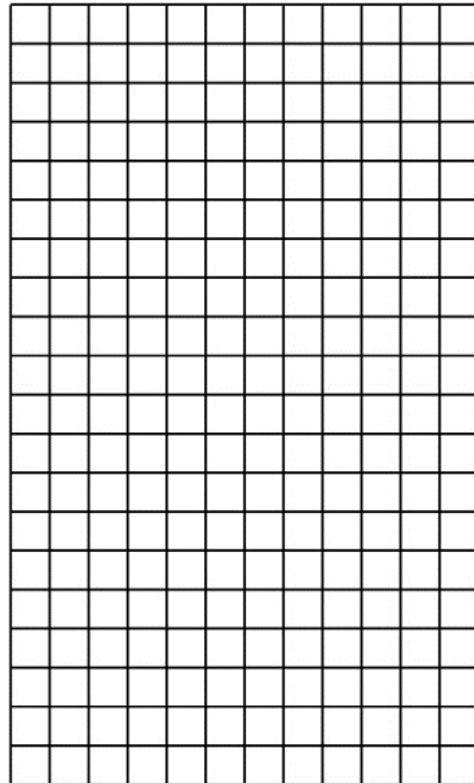
**Use a highlighter, marker or colored pencil to complete your drawings.**

1. The perimeter of a rectangle is 24 units.  Please provide three different possible sets of dimensions for that rectangle.  Prove your answers by drawing the three rectangles on the grid.

    a.  Length = _____, Width = _____

    b.  Length = _____, Width = _____

    c.  Length = _____, Width = _____

2. Draw two rectangles that have the <u>same area</u> but have different perimeters.
   List their dimensions here:

    a.  Length = _____,

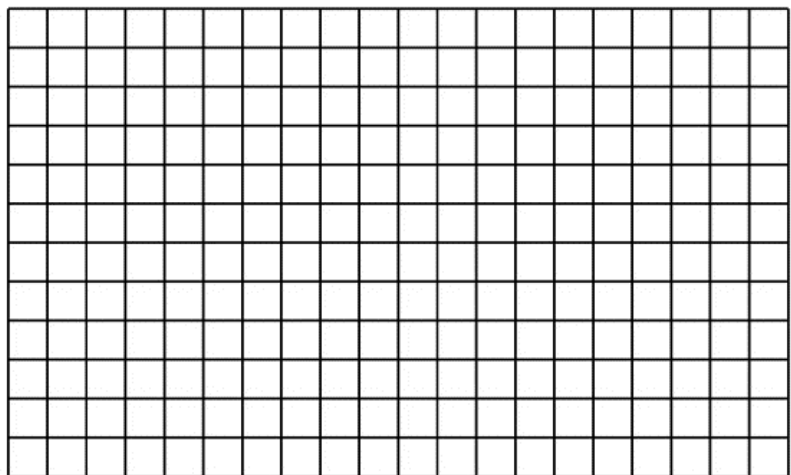       Width = _____

       Area = _____

       Perimeter = _____

**same**
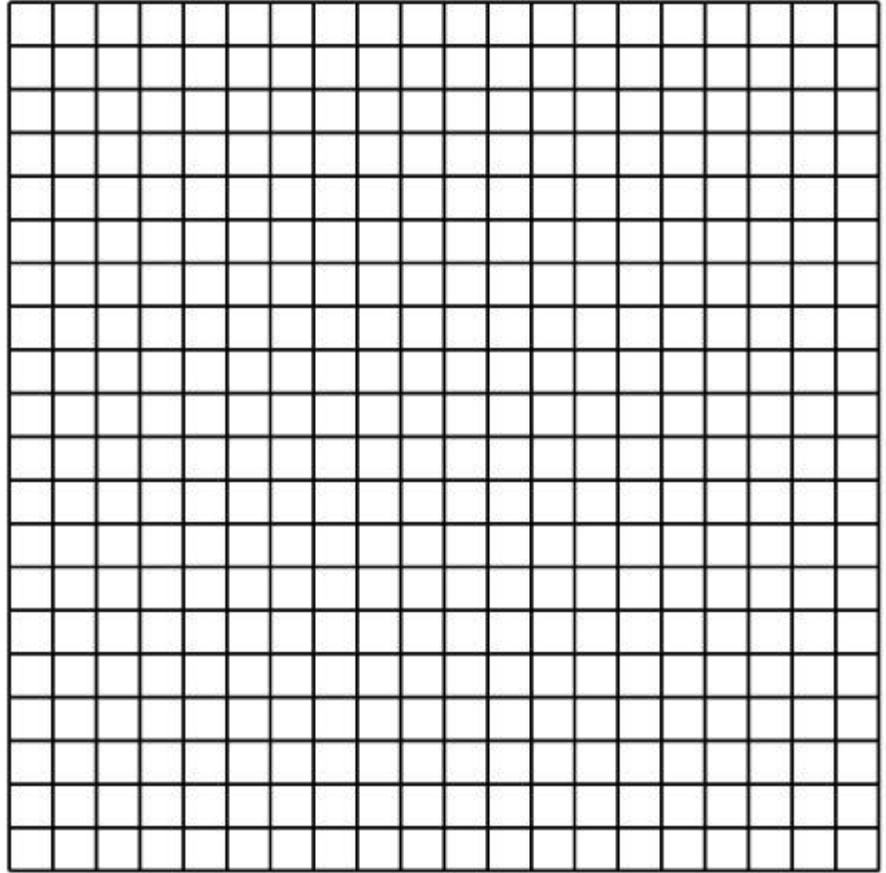
    b.  Length = _____,

       Width = _____

       Area = _____

       Perimeter = _____

3. The area of a rectangle is 18 units². **List** all possible sets of dimensions for that rectangle. Then **draw** one rectangle for every answer listed.

4. Draw two rectangles that have the same perimeter but have different areas.
   List their dimensions here:

   a. Length = _____,

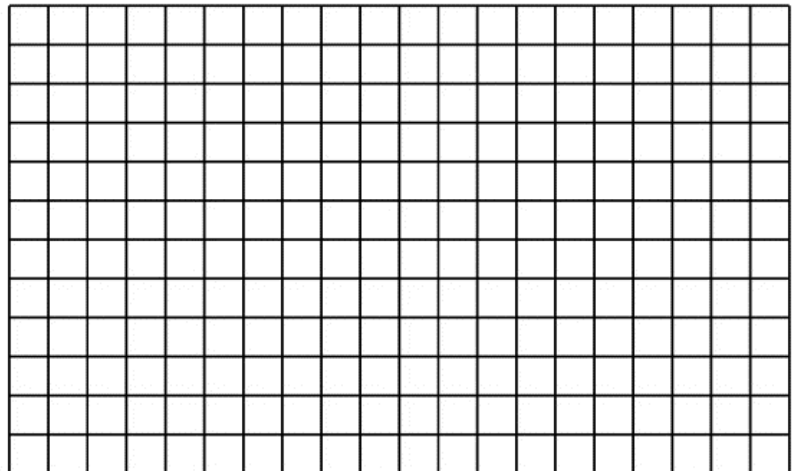      Width = _____

      Area = _____

      Perimeter = _____

   **same**   b. Length = _____,

      Width = _____

      Area = _____

      Perimeter = _____

5. Which of the following is *not* a perimeter?

   a. 32 in
   b. 60 ft
   c. 42 m
   d. 38 ft$^2$

6. Explain your answer from question 5.

7. If a square has a perimeter of 24 in, what is the length of one side?

_____

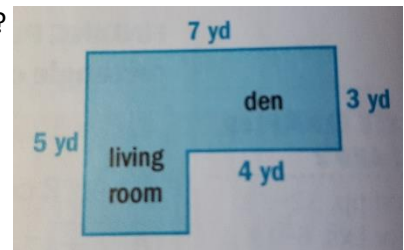8. If the area of a rectangle is 8 ft$^2$ and its length is 4 ft, what is its width?

_____

9. If the area of a square is 49 cm$^2$, what is the length of one side?

_____

10. Your family is getting wall-to-wall carpet installed in your living room and den, as shown. The carpeting costs $20 per square yard. What is the total cost for the carpeting?

    a. $380
    b. $460
    c. $540
    d. $820

    

    7 yd
    den    3 yd
    5 yd
    living room    4 yd

**CHALLENGE YOURSELF! The problems in this section are optional. They are not required.**

A. Find the perimeter of a square that has an area of 144 ft$^2$.

_____

B. Find the perimeter of a square that has an area of 196 ft$^2$.

_____

C. Find the perimeter of a rectangle that has an area of 28 m$^2$ and a width of 4m.

_____

D. You are planning to reseed the lawn. You do not need to reseed the flower bed in the middle. One pound of seed will cover 100 square feet. How many pounds of seed do you need to buy?



3 ft.
├6 ft.┤
19 ft.
9 in.
─39 ft. 10 in.─