"Changing Garden"

Name: _____

Imagine that you are designing a rectangular garden. Also suppose that,

- you want to close your garden with 30 feet of wire fencing so that animals won't eat your plants;
- you want to use all 30 feet of your fencing, without any gaps or overlaps; and
- your fencing comes in one-foot sections that you can't split into fractional parts.

Determine all the different ways in which you can arrange the 30 feet of fencing around your garden. Be sure to list the length, width, perimeter, and area of each arrangement.

1. Complete the chart

FENCE	LENGTH (Feet)	WIDTH (Feet)	PERIMETER (Feet)	AREA (Square Feet)
A				
B				
C				
D				
E				
F				
G				

2. What does *area* mean?

3. What does **perimeter** mean?

4. In the space below, use words, pictures, or numbers to describe how you would find the perimeter of a rectangle of any size.

5. Do all the possible gardens that use the 30 feet of wire fencing have the same perimeter? _____ Why, or why not?

6. Do all the possible gardens that use the 30 feet of wire fencing have the same area? _____ Why, or why not?