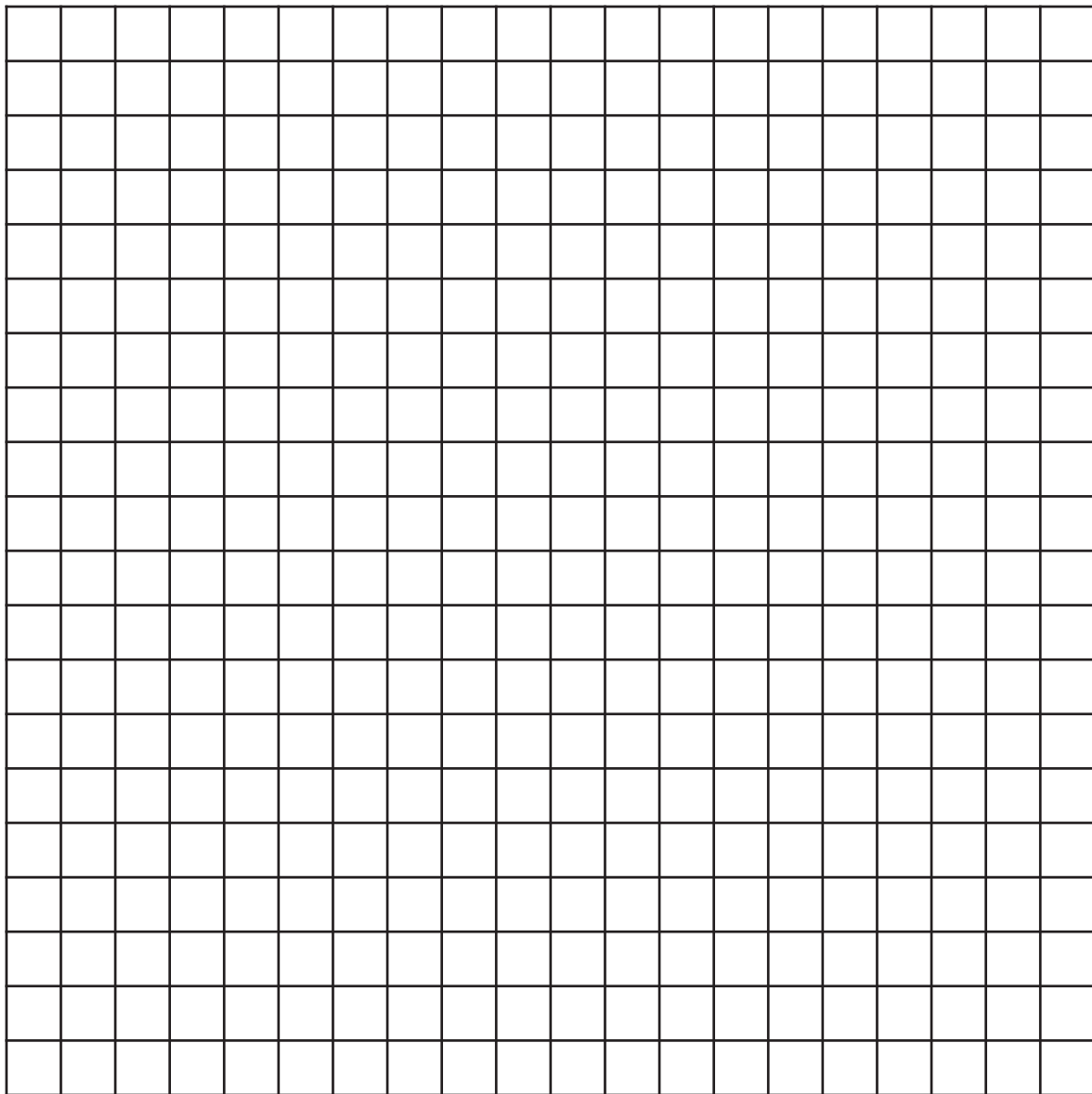


Using 200 Feet of Fencing

*Directions: Think about the situation below.
Sketch your ideas on the graph paper below.
Then answer the questions that follow.*



1. You have a 200-foot roll of fencing to create a garden. You want to keep the garden shape rectangular. Can you draw a size that uses all of the fencing? [Assume that the fencing will completely surround the garden.] See how many sizes you can draw.



2. Now look at the different rectangles you drew on page 1. Make a table to show your different lengths and widths. Would other size rectangles also work? If so, add those to your table below.

Length	Width	Perimeter

3. What pattern do you see?

4. What is the total for one length and one width of a rectangle? Why is that?

5. What would happen if you shortened the width of the garden but didn't change the length? Would you still use up the entire 200-foot roll of fencing? Why or why not? [Draw an example or two to test your out your idea.]

6. What would happen if you tried to double the length? What would you have to do to the width in order to keep a 200-ft. perimeter? [Draw a couple of examples to see what happens.]

7. What would happen if you doubled three of the sides but shortened the fourth side so that you could still have 200-ft perimeter? Could you still use the entire 200-feet of fencing? Could you still have a rectangle? [Try it and see!]

8. Using all 200' for fencing, is it possible to create a rectangle that has four sides that are the same? Why or why not? Prove it using a drawing or table.