Suppose that you are a contractor who installs chain-link fences. A local elementary school hires you to install a fence around their school playground such that the playground is surrounded on three sides with your fencing and the fourth side is the school building. The school can only afford 2,000 feet of fence, but they want the maximum area for the children to play in. Use this info to answer the following questions:

1. (2 points) Draw a picture of the situation.

2. (1 point) What are your two variables?

3. (2 points) What two equations do you have?

4. (2 points) What is your area equation in terms of one variable?

5. (3 points) What are the dimensions which will give the maximum area?

6. (bonus) What is the maximum area?