A city is planning to build a park along a major road. The park is to be rectangular with an area of 4000 square meters and will be fenced off on the three sides that are not adjacent to the road.

1. What is the least amount of fence required for this job?

2. What are the dimensions of the park in this case?

A city is planning to build a park along a major road. The park is to be rectangular and will be fenced off on the three sides that are not adjacent to the road. The city has 300 meters of fence to use for this project.

1. What is the largest possible area for the park?

2. What are the dimensions of the park in this case?

A cable is to be run from a solar farm on one side of a river to an office park on the other side. It costs $4 per meter to run the cable over land, while it costs $5 per meter to run the cable under water. Suppose the river is 200 meters wide and the factory is 1000 meters downstream from the power plant.

1. What is the most economical route to lay the cable?

2. How much will it cost?