

name _____

Applications of Quadratic Functions Word Problems

Part B - Shapes and Boarder

Part 3: Shapes

1. Farmer Joel wants to fence in a rectangular area that has one side bordered by a stream. If he has 80 m of fence, what are the dimensions and the maximum area he can enclose?

2. A handball court is to be surrounded by plastic stripping 30 m long. One side of the court does not need the stripping because it is a brick wall. What must be the dimensions of the court in order to obtain a maximum area? What is the maximum area?

10. A rectangular garden measures 15 m by 24 m. A larger garden is to be made by increasing each side length by the same amount. The resulting area is to be 1.5 times the original area. Find the dimensions of the new garden to the nearest tenth of a metre.
11. An open-topped box is to be made from a rectangular piece of tin measuring 50 cm by 40 cm by cutting square of equal size from each corner. The base area is to be 875 cm^2 . What is the volume of the box?