

Name: _____

Panther ID: _____

Take-home Quiz - Due Thursday, Dec. 20

Calculus I – Fall '14

To receive credit you **MUST SHOW ALL YOUR WORK.**

1. A rectangular container with square base and open top is to be made from 1200 ft^2 of material. Find the dimensions of the container with the greatest volume.

2. You are (unjustly) sent to jail. The prison is a tall building surrounded by an 8ft tall fence situated 4ft away from the building. Your buddies are organizing an escape for you. The main tool is a straight ladder. What is the shortest ladder that will pass over the fence, touch the ground on one side and the building on the other?