

Please show **all** your work! Answers without supporting work will not be given credit.  
Write answers in spaces provided.

Name: \_\_\_\_\_

1. [10 pts] A box with a square base and open top is to be made from 100 square inches of material. What is the volume of the largest box that can be made?

*To receive full credit for this problem, you must show all 7 steps, as discussed in lecture.*