

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

1. A 10-foot-high shed with a flat roof and three walls is to be constructed, as seen below. It is required that the shed have 800 square feet of floor space. Materials for the roof cost \$2 per square foot. Materials for the walls cost \$1 per square foot. Materials for the floor cost \$3 per square foot. What dimensions  $x$  and  $y$  will minimize the total cost of materials?

