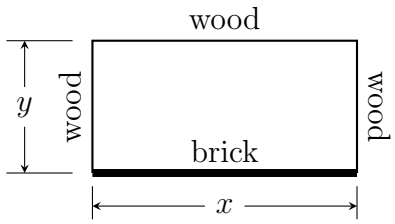
Name: _____

Quiz 18

MATH 200
October 28, 2025

1. Imagine that you have a budget of \$300 for materials to enclose a rectangular region with a fence. The south side of the rectangle will be bounded by a brick wall, and the fencing on the remaining three sides will be made of wood. The brick wall is \$10 per foot, and the wood wall is \$5 per foot. Given the above, find the dimensions x and y that enclose the greatest possible area.



Name: _____

Quiz 18

MATH 200
October 28, 2025

1. Imagine you need to design a tank with a square base that holds 10,000 cubic feet of water. The metal top costs \$6 per square foot, and the concrete sides and bottom cost \$4 per square foot. What dimensions x and y yield the lowest cost of materials?