
Name: _____

1. You need to build a shed with an open front and square base (as illustrated), and containing a volume of 10,000 cubic feet.

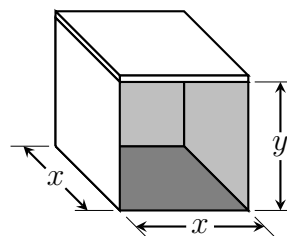
The cost of materials are:

Roof: \$10 per square foot;

Floor: \$5 per square foot.

Walls: \$8 per square foot;

Find the dimensions x and y that will minimize the total cost of materials.



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1. The strength of a rectangular beam is directly proportional to the product of its width and the square of its height. Find the dimension of the strongest beam that can be cut from a cylindrical log of diameter 10 inches.

