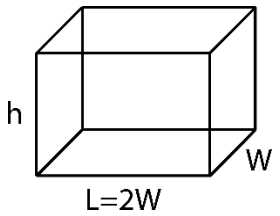
2) We are constructing a room whose base length is 2x its width. The materials for the top & bottom of the room cost \$7/meter^2 while the materials for the sides of the box cost \$4/meter^2. If the room must have a volume of 80m^3, determine the dimensions that will minimize the cost to build the room.



What is the height of the room in relation to its width?
Given: $l = 2w$, Volume = 80 = lwh. $h =$

What is the cost to build the room?
Cost = Material Cost x Areas

What is the dimensions that will be the most cost efficient to build?