NAME: _____ Per: _____ Date:_____

Area and Volume Quiz:

A landscape architect is designing <u>THREE PLANTED AREAS OUTSIDE A NEW MUSEUM</u>. Use the coverage chart to help you complete the table below. For each planted area, round the number of cubic yards of wood chips to the nearest whole number.

Coverage Chart for one cubic yard of Wood Chips	
Depth of Chips (inches)	**Area Chips Covered (ft²)**
$\frac{1}{2}$	640
1	320
2	160
3	120
4	80

	Shape	Dimensions (ft.)	Area (ft²)	Depth of Wood Chips (inches)	Cubic Yards of Wood Chips
A	RECTANGLE	Length: 80 Width: 40		$\frac{1}{2}$	
B	CIRCLE	Diameter: 30		3	
C	TRIANGLE	Base: 50 Height: 20		4	

<u>Use the completed table to answer the following questions:</u>

1. How many cubic yards of wood chips will be needed altogether? Show Work!

2. Wood chips cost $17.75 per cubic yard. What will be the total cost of the wood chips for this project? Show Work!

3. **The landscape architect needs to lower the total cost of the wood chips. Describe one way to change the depth of the wood chips in one or more of the planted areas so that the total cost is between $200 and $250. Explain your answer in complete sentences.**

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