

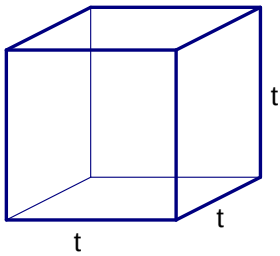


Estimating Volumes

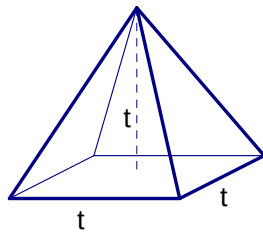
Standard: Estimate a volume of a solid
Compare volumes to find the greatest and the least volumes
Logically explain your conclusions

Task:

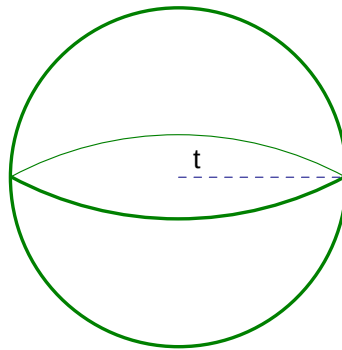
- 1) Take an educated guess to decide
- a) which solid has the greatest volume
 - b) which solid has the least volume
- if t represents the same length for each solid.
(the scale is the same for all diagrams)



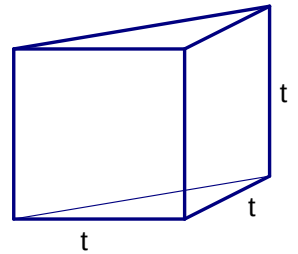
A.



B.



C.



D.

The greatest volume _____

The least volume _____

- 2) Briefly describe why you decided that the particular solid has the greatest volume.

- 3) Briefly describe why you decided that the particular solid has the least volume.

4) Evaluate the volume of the solids using the formulas:

a) Rectangular prism $V = (l \cdot w) \cdot H$

b) Triangular prism $V = (\frac{1}{2} \cdot b \cdot h) \cdot H$

c) Rectangular pyramid $V = \frac{1}{3} (l \cdot w) \cdot H$

d) Sphere $V = \frac{4}{3} \cdot \pi r^3$

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a) According to your calculations, what is the greatest volume? _____

b) According to your calculations, what is the least volume? _____

	3	2	1	0
<i>Estimate the greatest and the least volumes</i>			<i>The estimate is completed</i>	<i>No estimate is done</i>
<i>Explain your reasons for choosing the solids with the greatest and the least volume</i>	<i>The explanations are sound and reasonable</i>	<i>The explanations are somewhat vague</i>	<i>There is only one explanation or the explanations are not reasonable</i>	<i>No explanations given</i>
<i>The volumes are calculated correctly for all solids</i>	<i>All volumes are calculated correctly</i>	<i>3 volumes are calculated correctly</i>	<i>2 or 1 volumes are calculated correctly</i>	<i>None of the volumes are calculated correctly</i>
<i>The greatest and the least volumes are identified correctly</i>		<i>The greatest and the least volumes are identified correctly</i>	<i>Only one of the volumes is identified correctly</i>	<i>Neither volume is identified correctly</i>