

# MeTEOR Performance Task

## Seventh Grade

Mathematics  
All About Boxes

## Complete Performance Task Scoring Rubric

### *All about Boxes*

19-21 Proficient   14-18 Good   9-13 Satisfactory   5-8 Poor   0-4 Unsatisfactory

	Depth of Knowledge Level	Points	Total Possible Points for Task	Total Points Earned by Student
<b>Task 1:</b> A. $V = lwh$ or $V = Bh$  B. The total outside area of a surface; the area of such an outer part or uppermost layer.  C. $98 \text{ cm}^2$	<b>1</b>	<b>1</b>  <b>1</b>  <b>1</b>	<b>3</b>	
<b>Task 2:</b> A. $8 \text{ cm}^3$ .  B. $2 \times 2 \times 2$ : $V = lwh$ .  C. $64 \text{ cm}^2$	<b>2</b>	<b>1</b>  <b>1</b>  <b>1</b>	<b>3</b>	
<b>Task 3:</b> A. $192 \text{ cm}^3$ .  B. $208 \text{ cm}^2$ : Bottom and Top are each $48 \text{ cm}^2$ ( $8 \times 6$ ), total for them is $96 \text{ cm}^2$ . Front and Back are each $32 \text{ cm}^2$ ( $8 \times 4$ ), total for them is $64 \text{ cm}^2$ . Left and Right are each $24 \text{ cm}^2$ ( $6 \times 4$ ), total for them is $48 \text{ cm}^2$ . Total Surface can be found by adding area of all sides.	<b>2</b>	<b>1</b>  <b>2</b>	<b>3</b>	
<b>Task 4:</b> A. Answers will vary. Student Volume calculations should show an understanding of $V = lwh$ . Each box designed should have a volume of $4000 \text{ cm}^3$	<b>3</b>	<b>2</b>	<b>12</b>	

<p>B. Answers will vary. However, the student should demonstrate understanding of how to calculate Total Surface Area.</p>		2		
<p>C. Answers will vary. Student should multiply answers in part B to \$0.0002.</p>		3		
<p>D. Answers will vary. Students should use volume to compare the space each box would take up. It is not necessary for the students to multiply by four because of the amount of shelves. Student answers should include the ability to place more boxes on each shelf; therefore they are looking for the box with the least volume as their choice.</p>		5		
<b>TOTAL POINTS:</b>				



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