

MeTEOR Performance Task

Sixth Grade

Mathematics

Sophie's Choice



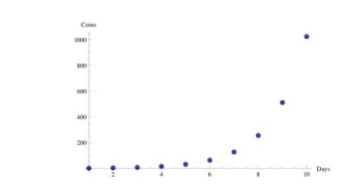
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MeTEOR
CONNECTING THE DOTS

Complete Performance Task Scoring Rubric *Sophie's Choice*

30-53 Proficient 22-29 Good 18-21 Satisfactory 15-17 Poor 0-14 Unsatisfactory

	Depth of Knowledge Level	Points	Total Possible Points for Task	Total Points Earned by Student
Task 1: A. Power or exponent B. 12	1	1 1	2	
Task 2: A. $4 \times 4 \times 4 = 64$ B. Answers will vary. Possible Explanation: 4 to the power of 3 is 64, because you multiply the product of 4×4 to another factor of 4. However, 4×3 means you only have 3 groups of 4, which is only 12.	2	1 2	3	
Task 3: A. Answers will vary. Option One is more money. Option Two is only pennies a day. B. 60,000 C. $2 \times 2 \times 2$ D. 2^3	2	1 1 1 1	4	

Task 4:	3	10	23																											
<p>A.</p> <table border="1" data-bbox="256 254 563 558"> <thead> <tr> <th>Day</th> <th>Number of Coins</th> </tr> </thead> <tbody> <tr><td>1</td><td>$2 = 2^1$</td></tr> <tr><td>2</td><td>$4 = 2^2$</td></tr> <tr><td>3</td><td>$8 = 2^3$</td></tr> <tr><td>4</td><td>$16 = 2^4$</td></tr> <tr><td>5</td><td>$32 = 2^5$</td></tr> <tr><td>6</td><td>$64 = 2^6$</td></tr> <tr><td>7</td><td>$128 = 2^7$</td></tr> <tr><td>8</td><td>$256 = 2^8$</td></tr> <tr><td>9</td><td>$512 = 2^9$</td></tr> <tr><td>10</td><td>$1024 = 2^{10}$</td></tr> <tr><td>...</td><td>...</td></tr> <tr><td>28</td><td>$268,435,456 = 2^{28}$</td></tr> </tbody> </table> <p>B.</p>  <p>C. Large intervals for the cents because of the quick growth.</p>	Day	Number of Coins	1	$2 = 2^1$	2	$4 = 2^2$	3	$8 = 2^3$	4	$16 = 2^4$	5	$32 = 2^5$	6	$64 = 2^6$	7	$128 = 2^7$	8	$256 = 2^8$	9	$512 = 2^9$	10	$1024 = 2^{10}$	28	$268,435,456 = 2^{28}$		10	10	3
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<p>Task 5:</p> <p>A. By day 28, Sophie would have 268,435,456 cents or \$2,684,354.56. Accept any reasonable answer. If converting to dollars, anything over a million dollars is reasonable.</p> <p>B. Answers will vary. If students choose option one, they should deduce that their answer was grossly off; therefore Sophie may not have gotten the job. If they choose option 2, they should conclude that Sophie demonstrated quick decision making skills along with mathematical reasoning and would have gotten the job.</p>	3	3	6																											

<p>Task 6:</p> <p>A. Answers will vary. Look for demonstrations of clarifying any mathematical concept or misconception.</p> <p>B. Answers will vary, but should demonstrate complete understanding of mathematical concepts in Part A.</p>	<p>4</p>	<p>10</p> <p>5</p>	<p>15</p>	
TOTAL POINTS:				



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