

MeTEOR Performance Task

Algebra II

Mathematics
Population Growth

Complete Performance Task Scoring Rubric *Population Growth*

21-23 Proficient 19-20 Good 16-18 Satisfactory 14-15 Poor 0-13 Unsatisfactory

	Depth of Knowledge Level	Points	Total Possible Points for Task	Total Points Earned by Student
<p>Task 1:</p> <p>A. Radicand, rational</p> <p>B. Raise each side of the equation to the reciprocal power</p> <p>C. $7, -9$ $5, -11$ 4 5 2 23</p> <p>D. About 8 minutes</p>	1	<p>1</p> <p>1</p> <p>3</p> <p>1</p>	6	
<p>Task 2:</p> <p>A. When a number satisfies the transformed equation, but not the original equation when checked.</p> <p>B. $x = 625$, extraneous $x = 23$, extraneous $x = 0, -1$</p> <p>C. Benjamin did not check his work, but Makayla did. She found that 1 was extraneous because it did not work as a solution to the original equation.</p> <p>D. “First, I substituted the 20 in for y, and then solved the radical by squaring both sides, subtracting and performing division. I got 5. I added 5 to the year and got 2005.”</p>	2	<p>1</p> <p>3</p> <p>1</p> <p>2</p>	7	

<p>Task 3:</p> <p>A. 6.6 years</p> <p>B. 1.35 million</p> <p>C. 12.5 years</p> <p>D. Answers may vary. Possible Explanation: “First, I knew I had to double the amount that Ruthie and Lyndie would get because their half was divided by two. Then, I had to double that amount because the Shark Team gets half of the total. That took me up to 18 million. I substituted this amount into the equation and solved for x. I got 12.5 years.”</p>	<p>2</p>	<p>1</p> <p>1</p> <p>1</p> <p>2</p>	<p>5</p>	
<p>Task 4:</p> <p>A. 26 years</p> <p>B. 56.5 years</p> <p>C. 2110 “I will not be on the board at that time.”</p> <p>D. Answers may vary. Possible Explanation: “I solved the equation with the given information and came up with 95.7 years. That means it would take 95.7 years to hit the population limit. I would have to add that number to my current age. Assuming I will not be living at that time, I won’t be here to handle the situation.”</p>	<p>3</p>	<p>1</p> <p>1</p> <p>1</p> <p>2</p>	<p>5</p>	
TOTAL POINTS:				



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