

<p>Task Model 2</p> <p>DOK Levels 2, 3, 4</p> <p>Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem.</p> <p>Target B</p>	<p>Task Expectations: The student either:</p> <ul style="list-style-type: none"> justifies the mathematical model(s) used justifies the interpretation(s) shown and/or justifies the solution(s) given to a complex problem. <p>Example Item 1 (Grade 8):</p> <p>Primary Target 4B (Content Domain SP), Secondary Target 1J (CCSS 8.SP.1), Tertiary Target 1F (CCSS 8.F.4)</p> <p>This scatter diagram shows the lengths and the widths of the eggs of some American birds.</p> <div data-bbox="730 657 1270 1128" data-label="Figure"> <table border="1"> <caption>Data points from the scatter diagram 'Sizes of Birds' Eggs'</caption> <thead> <tr> <th>Length (mm)</th> <th>Width (mm)</th> </tr> </thead> <tbody> <tr><td>15</td><td>10</td></tr> <tr><td>18</td><td>12</td></tr> <tr><td>22</td><td>15</td></tr> <tr><td>25</td><td>18</td></tr> <tr><td>30</td><td>20</td></tr> <tr><td>35</td><td>28</td></tr> <tr><td>40</td><td>30</td></tr> <tr><td>45</td><td>32</td></tr> <tr><td>65</td><td>45</td></tr> <tr><td>70</td><td>55</td></tr> <tr><td>75</td><td>58</td></tr> <tr><td>78</td><td>60</td></tr> </tbody> </table> </div> <p>Part A</p> <p>What does the graph show about the relationship between the lengths of birds' eggs and their widths?</p> <p>Part B</p> <p>Fossils show that dinosaur eggs closely resemble the shape of bird eggs. One such dinosaur (sauropods) grew from eggs that were 180 millimeters in length.</p> <p>Assume that sauropod eggs were the same shape as bird eggs. Approximate the width of sauropod eggs. Explain how you determined your answer.</p> <p>Label your answers to both parts of the problem in the response box. Be sure to use information from the</p>	Length (mm)	Width (mm)	15	10	18	12	22	15	25	18	30	20	35	28	40	30	45	32	65	45	70	55	75	58	78	60
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scatterplot to support your answers.

Exemplar³:

Part A: Typically, the greater the length of the egg, the greater the width.

Part B: The width is approximately 126 mm (accept values between 115 and 135 mm).

"I multiplied by about 0.7" or "The width is a little less than $\frac{3}{4}$ of the length" or "I doubled the width of the egg that is 90 mm long."

Rubric: (2 points) The student is able to answer both parts correctly and provide sufficient explanation/support for the answer to *Part B*.

(1 point) The student only answers one part correctly.

Response Type: Short Text (handscored)

³ An exemplar response represents only one possible solution. Typically, many other solutions/responses may receive full credit. The full range of acceptable responses is determined during rangefinding and/or scoring validation.