## Birds' Eggs

This problem gives you the chance to:

- interpret a scatter diagram including comparing gradients

This scatter diagram shows the lengths and the widths of the eggs of some American birds.


1. Mallards' eggs have an average length of 57.8 millimeters and average width 41.6 millimeters.

Use an $\mathbf{X}$ to mark a point that represents this on the scatter diagram.
2. What does the graph show about the connection between the lengths of birds' eggs and their widths?
3. Use the graph to estimate the width of the eggs with a length of 35 millimeters.
$\qquad$ millimeters
4. Describe the differences in shape of the two eggs $C$ and $D$.
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$\qquad$
5. Which of the eggs $\mathrm{A}, \mathrm{B}, \mathrm{C}, \mathrm{D}$, and E has the greatest ratio of length to width? Explain how you decided.
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| The core elements of performance required by this task are: <br> - interpret a scatter diagram including comparing gradients <br> Based on these, credit for specific aspects of performance should be assigned as follows | points | section points |
| :---: | :---: | :---: |
| 1. Marks points correctly. <br> Accept points within 1 square of correct position. | 1 | 1 |
| 2. Gives a correct description such as: <br> Generally, the greater the length of the egg, the greater is its width. | 1 | 1 |
| 3. Gives correct answer: $\mathbf{2 5} \mathrm{mm}$ approximately. Accept values between 22 and 28 . | 1 | 1 |
| 4. Gives a correct explanation such as: They have the same width but D is longer. or C is a shorter and fatter shape. | $\begin{gathered} 2 \\ \text { or } \\ 2 \end{gathered}$ | 2 |
| 5. Gives a correct answer: $\mathbf{E}$ <br> and <br> Gives a correct explanation such as: <br> The line joining E to the origin is the flattest of all the lines joining $\mathrm{A}, \mathrm{B}, \mathrm{C}$, $D$, and $E$ to the origin. <br> or <br> Gives all the ratios simplified for comparison. | 1 <br> 1 <br> or <br> 1 | 2 |
| Total Points |  | 7 |

