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In this adventure, you will determine how the temperature of water affects the dissolving time of a sugar cube.

| Temperature $\left({ }^{\circ} \mathrm{C}\right)$ | Dissolving Time (sec) |
| :---: | :--- |
| $5^{\circ}$ |  |
| $25^{\circ}$ |  |
| $35^{\circ}$ |  |



Equation of regression line: $\qquad$ -.

1. What is the slope of the linear regression line?
2. What does this value represent?
3. What is the $y$-intercept of the linear regression line?
4. What does the $y$-intercept represent?
5. Is this a realistic value? Why or why not?
6. Use the arrow keys to move along the regression line. At what temperature does the sugar cube dissolve in 10 seconds?
7. At what temperature will the sugar cube dissolve in one second?
8. As the temperature of the water $\qquad$ , the dissolving time of the sugar cube $\qquad$ .
