$\qquad$

Write a story that can be modeled with a piecewise function. Your story needs to be creative and school appropriate. Choose one of your interests or make up your own story. The length of the story needs to be between one half to a full page. Your piecewise function needs to have at least three pieces.

## Please create a Google Sheets presentation or Poster.

Include all of the following:

- Title to indicate context of your story
- Written version of your story
- Video version of your story
- Graph of your function (Desmos or on paper) Desmos Instructions
- Equation
- A table of values that contains points from all pieces of your function
- Key features of your function including their interpretation in context

Identify and interpret the following key features.

| Key Feature | Identify, use interval notation when possible. |  |
| :--- | :--- | :--- |
| Domain |  | Interpret in Context |
| Range |  |  |
| Intervals of Increase |  |  |
| Intervals of Decrease |  |  |
| Intervals where Constant |  |  |
| x-intercept(s) |  |  |
| y-intercept |  |  |
| Relative maximum(s) |  |  |
| Relative minimum(s) |  |  |
| Absolute maximum |  |  |
| Absolute Minimum |  |  |
| End Behavior |  |  |
| Continuous or Discontinuous |  |  |

Evaluate the function for the following values, if the provided values are not in your domain or range then change the values to better fit your story. Indicate their locations on your graph and what the point means in the context of your story.

| Evaluate | Explain with words what the point means in the context of your story. |
| :--- | :--- |
| $\mathrm{f}(2)=$ |  |
| $\mathrm{f}(\mathrm{x})=10, \mathrm{x}=$ |  |

