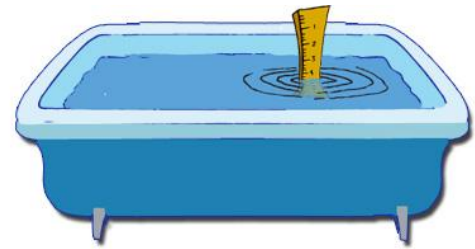


Bathtub Water Levels Activity Guide

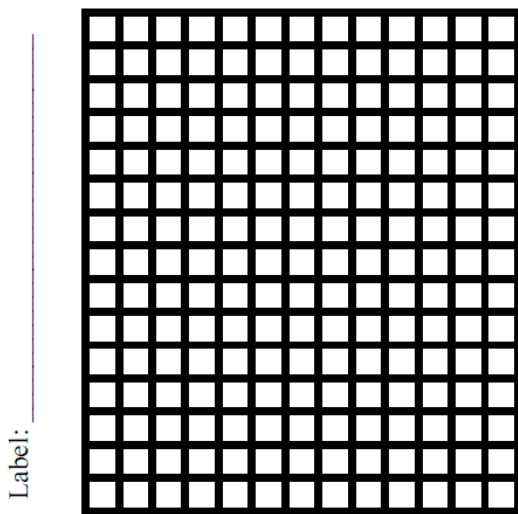


Bathtub Water Levels	
Time (in minutes)	Depth (in centimeters)
0:00	12
1:00	7.5
2:00	3.3
2:30	0

Answer the following questions using the Bathtub Water Level chart. Complete the graph below.

1. What is the slope of a line? What does it mean to the graph of a line?
2. What is the relationship between the slope of a line and the rate of change?
3. How do the labels on the axes of a graph help determine the rate of change?
4. What do we know about the y -intercept of any graph?
5. What does the y -intercept tell us about a real-life application?
6. What is a correlation coefficient? What does it tell us about the points being plotted and the resulting least squares regression line?

Graphing Real-Life Data



Rate of change:

Meaning of the slope in the context of your example:

y -intercept:

Meaning of the y -intercept in the context of your example:

Answer the following questions.

- Do you notice any pattern in the shape of the plot?
- What type of function do you think will fit this data?
- Do you think the slope of the line will be positive or negative?
- What is the y -intercept of the line and what does it mean?