



**Problem 1 – The Power Property of Logarithms**

- What is the shape of the graph on page 1.7? Is it what you expected?
- What is the shape of the graph on page 1.9? Is it what you expected?
- What is the function that fits the graph on page 1.9?
- What is the Power Property of Logarithms?

**Problem 2 – The Product Property of Logarithms**

- What is the shape of the graph on page 2.5?
- Use linear regression to graph the line that passes through the plotted points on page 2.5.
- What is its  $y$ -intercept and slope? Is this what you expected?
- What is the  $y$ -intercept of the graph on page 2.8? Where did it come from?
- What is the Product Property of Logarithms?



### Problem 3 – The Quotient Property of Logarithms

- Why does the log scale on page 3.3 start at 1 instead of 0?
- To simplify the expression  $\log_{10}\left(\frac{8}{a}\right)$  using the log-log paper on page 3.3, define  $b = \frac{8}{a}$  and graph the function  $y = \frac{8}{a}$  on the log-log paper. Use the **Point** tool to plot points that satisfy the function with whole number coordinates.
- What is the shape of the graph? What is its slope?
- What is the  $y$ -intercept of the line passing through these points? Where did it come from?
- What is the Quotient Property of Logarithms?