

Alaskan Moose Exercise

From the “Think About It,” page 162: What is the relationship between the age of a moose and its weight?

By a “relationship between two quantities” we mean a way to determine one quantity, given the other. For example, suppose we have a relationship between a moose’s age and its weight. If I told you my pet moose is 3 years old, then the relationship should allow you to figure out how much my moose weighs. Having such a relationship is saying that weight is a function of age. Draw a graph of what such a function might look like. Here are some tips:

- Given an age, you want to be able to find the weight; so age is the independent variable, and weight is the dependent variable. As a rule of thumb, put the independent variable on the horizontal axis of your graph.
- Label your axes, including units (kg for weight and years for age).
- Title your graph with a title that accurately summarizes the graph’s content.
- Make sure your graph makes sense.
 - Is the moose’s weight positive?
 - Is the domain reasonable? In this case, the domain is the interval of ages that you are going to discuss, i.e. what numbers you will have on your horizontal axis. Some breeds of moose live between 15 and 25 years, so says wikipedia.org. Make sure the ages in your diagram are reasonable.
 - Is there exactly one weight for each age (i.e. does the graph pass the vertical line test)?