**Modelling with Linear Graphs**

Many real life variables have a ‘linear’ relationship, i.e. there is a fixed increase/decrease in one variable each time the other variable goes up by 1 unit.

**Example**

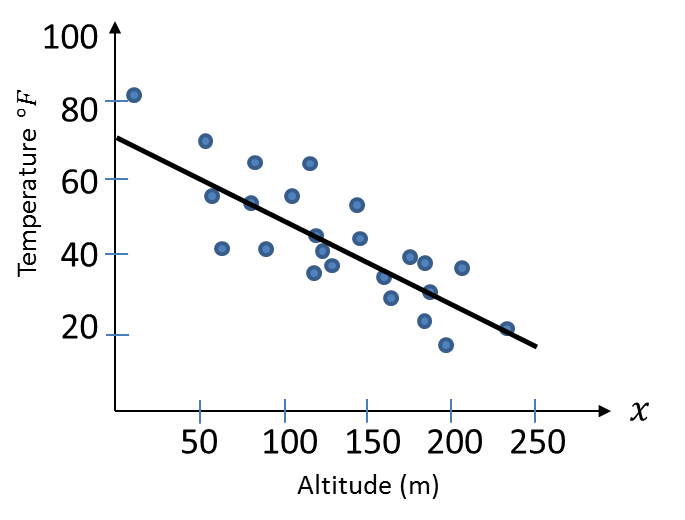
The temperature at different points on a mountain is recorded at different altitudes .

Suppose we were to use a linear model .

a) Determine and (you can assume the line goes through and .

b) Interpret the meaning of m and c in this context

c) Predict at what altitude the temperature reaches

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**Evaluating a Model**

Example:

The current population of Bickerstonia is 26000. This year (2017) the population increased by 150. Matt decides to model the population based on the years after 2017 by the linear model:

Why might this not be a suitable model?

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