

ccf = 100 cubic feet

### Math 323 Probability and Statistics Gas Usage Exercise

Consider the following data of the average daily gas usage in the Bowen-Housman home versus average daily temperature during 2010. Our goal is to explain gas usage as a function of temperature. Draw a scatter plot and a straight line that best captures the trend of the data. Determine an equation of the straight line. Estimate the maximum and average deviation between the data and model. Use the model equation to predict the gas usage if the average daily temperature was 20° F and state the likely precision of this prediction. Interpret the equation's parameters.

Temperature (° F)	25.4	28.2	30.2	47.9	58.5	65.3	73.3	75.7	71.6	65.1	52.1	36.5
Gas Usage (ccf/day)	11.9	11.8	9.5	4.9	3.3	1.7	1.0	1.1	1.1	2.4	5.0	7.8

