

**Problem 1. (Cowboys: Longevity)**

How long did real cowboys live? One answer may be found in the book *The Last Cowboys* by Connie Brooks (University of New Mexico Press). This delightful book presents a thoughtful sociological study of cowboys in West Texas and Southeastern New Mexico around the year 1890. A sample of 32 cowboys gave the following years of longevity:

58 52 68 86 72 66 97 89 84 91 91  
92 66 68 87 86 73 61 70 75 72 73  
85 84 90 57 77 76 84 93 58 47

(a) Make a stem-and-leaf display for these data.

(b) Consider the following quote from Baron von Richthofen in his *Cattle Raising on the Plains of North America*: “Cowboys are to be found among the sons of the best families. The truth is probably that most were not a drunken, gambling lot, quick to draw and fire their pistols.” Does the data distribution of longevity lend credence to this quote?

**Problem 2. (Environmental Studies: Death Valley)**

How hot does it get in Death Valley? The following data are taken from a study conducted by the National Park System, of which Death Valley is a unit. The ground temperatures ( $^{\circ}\text{F}$ ) were taken from May to November in the vicinity of Furnace Creek.

146	152	168	174	180	178	179
180	178	178	168	165	152	144

Compute the mean, median, and mode for these ground temperatures.

**Problem 3. (Merit Pay Scale: Weighted Average)**

At General Hospital, nurses are given performance evaluations to determine eligibility for merit pay raises. The supervisor rates the nurses on a scale of 1 to 10 (10 being the highest rating) for several activities: promptness, record keeping, appearance, and bedside manner with patients. Then an average is determined by giving a weight of 2 for promptness, 3 for record keeping, 1 for appearance, and 4 for bedside manner with patients. What is the average rating for a nurse with ratings of 9 for promptness, 7 for record keeping, 6 for appearance, and 10 for bedside manner?