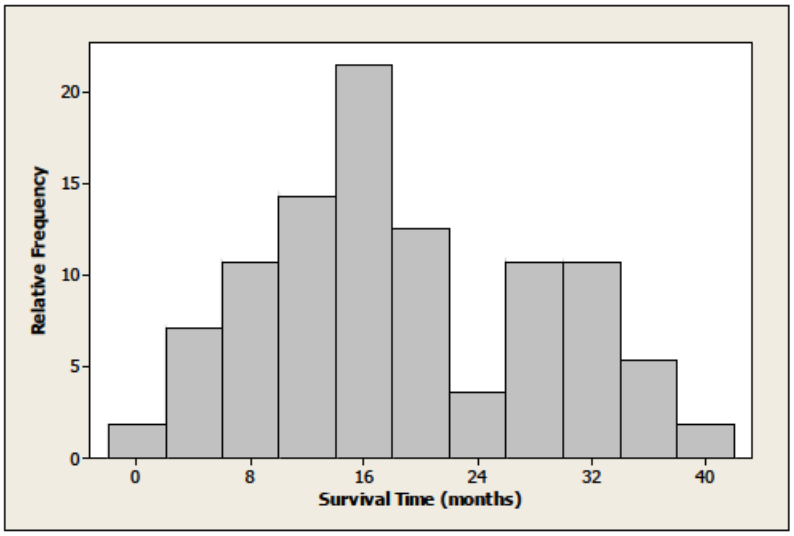
3.8 The following histogram of the data from the two therapies combined is bimodal and skewed to the right. Because of the bimodality, the histogram does appear to show two separate populations



3.26

a. $\bar{y} = \frac{\sum y_i}{n} = \frac{40}{8} = 5$ years. This value does appear to adequately represent the data set.

b.

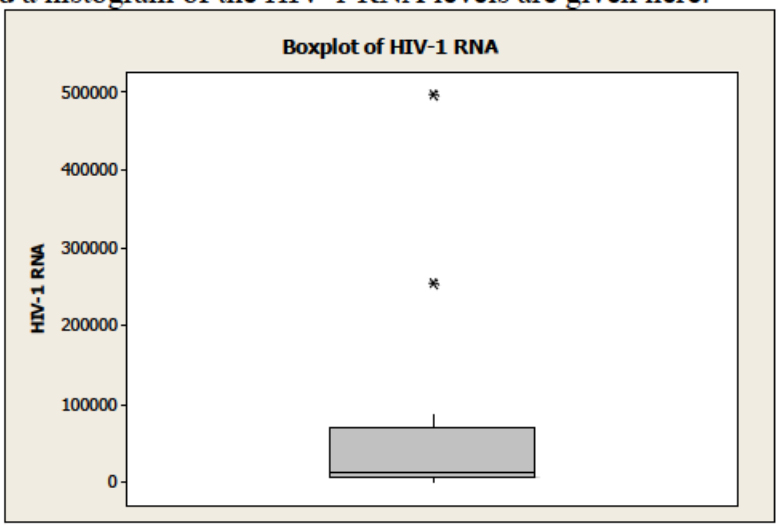
$$\sum_{i=1}^{8} (y_i - 5)^2 = (6-5)^2 + (3-5)^2 + (10-5)^2 + (4-5)^2 + (4-5)^2 + (2-5)^2 + (4-5)^2 + (7-5)^2$$

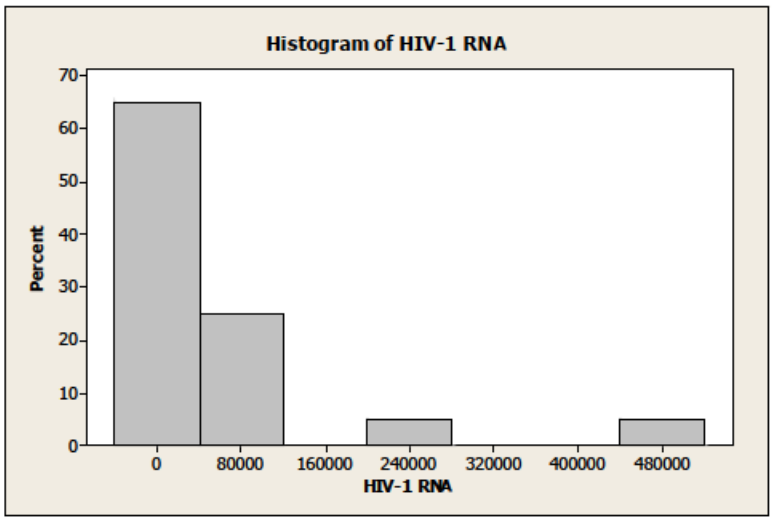
$$= 1 + 4 + 25 + 1 + 1 + 9 + 1 + 4 = 46$$

c. $s^2 = \frac{46}{8-1} = 6.57 \Rightarrow s = 2.56$ years. The $CV = 100\frac{s}{y}\% = 100\frac{2.56}{5}\% = 51\%$. The standard deviation is 51% of the mean.

3.76

a. Mean = 61,667.95; Median = 13,956.5; s = 117,539.3
b. 25th percentile = 8,914; 50th percentile = median = 13,956.5; 75th percentile = 63,554.5
c. A boxplot and a histogram of the HIV-1 RNA levels are given here:





d. The distribution of HIV-1 RNA levels is unimodal and highly skewed to the right with two high outliers (256,440 and 496,433).