8.

a)

The mean is 47.04 and the median is 45.55

b)

I think the median would be the better measure of center because the data is skewed to the right. As a result, the mean will be bigger than the median which doesn’t not reflect the fact that most of the data is on the left side. The median will always typically be where the data has most frequency, which in this case is more on the left side of the histogram than the mean.

c)

d)

We fail to reject the null hypothesis that median is equal to 41, since sign p-value is 0.8746 above significance level of 0.05.

9.

a)

I do have the right rows and columns, as I have noticed that the data is delimited by spaces, which I took account of, when reading the data into SAS. There are 12 rows and 2 columns of data.

b)

Each of the 12 male students have a height that they each report and the actual height that the experimenters measure. As a result, the heights reported and the heights measured do not each come from two independent samples. The data is matched-pair data, not two independent samples because the data compares two values of height for each male student.

c)

The matched-pairs t-test should be two-sided because our null hypothesis will be that reported heights mean and actual heights mean are equal and our alternative hypothesis will be that reported heights mean and actual heights mean are not equal.

d)

We reject the null hypothesis of the reported heights mean being equal to actual heights mean, since sign p-value is 0.0101 which is below significance level of 0.05.