Unit 7 Practice Test additional parts to #5:

f) What is the r-squared value? Interpret the meaning of this value.

r-squared =.566
56.6% of the variation in student weights is explained by the LSRL relating student weight to student height.

g) What is S_b? Interpret the meaning of this value.

S_b=1.333 lbs/in
If we repeated the experiment multiple times, each sample's LSRL would have a slope b. These slopes would vary from sample to sample. S_b=1.333 lbs/in is the standard error or standard deviation (a measure of variability) of these sample LSRL slope values.

h) What is s? Interpret the meaning of this value.

S=14.16 lbs
The value s=14.16 lbs is the standard deviation of the residuals. This means that for a given student height, the LSRL provides a predicted student weight. The actual students at that height have different weights, some above and some below the predicted weight. S=14.16 lbs means that the average difference between actual weights and the LSRL predicted weight, for a given height, is 14.16 lbs.