\[
\hat{Y} = -2.679 + 9.5X
\]

\(\hat{Y}\) = predicted height of soap suds

\(X\) = amount of dish soap

\(S = 1.99821\) is the standard deviation of the residuals. The statistic measures a typical amount of variability in the vertical distances from the observed height of the soap suds to the regression line.

\(\text{C}\) The standard error of the slope 0.7553 mm per gram. Thus the standard deviation of the estimated slope for predicting the height of soap suds is estimated to be 0.7533 mm per gram.

Variability between experimental results.