**ECO 2200 Quiz 5**

The data in the table is the number of absences for 7 students and their corresponding grade.

Number of Absences Grade

1 4

1 3.7

2 3.5

2 2.7

3 2.4

3 1.7

7 1.7

The regression model is assumed to be

$$y=β\_{0}+β\_{1}x+ε$$

and is estimated to be

$$\hat{y}=b\_{0}+b\_{1}x.$$

The regression output is given by



1. What is the value of b0? What is the value of b1?

2. What is the value of the sum of squared errors (SSE)?

3. What is value of the mean squared error (MSE) or the estimated variance of errors, $s\_{e}^{2}$?

4. What is the value of the estimated standard deviation (i.e., the standard error) of the slope, $s\_{b1}$?

5. What is the 95% confidence interval for the slope?

6. If $H\_{0}:β\_{1}=0$ and $H\_{a}:β\_{1}\ne 0$, can we reject $H\_{0}$ at α=0.05?

7. What is the predicted grade for two absences?

8. What proportion of the variation in grades is explained by absences?