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Stat Test Corrections

1. C is not a valid interpretation because we can change our interval when we are dealing with a distribution of samples rather than a singular sample distribution
2. A is also an answer. We can not determine the size of the difference between white and non white offenders, only that there is a difference.

3. B is not a valid answer. This is because SSE is always smaller than SSModel
5. D is also an answer because we do not need to assess these conditions for a regression between the two variables.

6. Step 2:
Step 3: We also want to assess our model using plots. So we will use a normal quantile plot so we can see that the normality condition holds. We also want to look at our residuals vs our fitted values so we can see that our linear variance condition holds.
Step 4: We can also answer questions using confidence intervals and prediction intervals

8. A. Using the studentized residuals, we can verify that the normality conditions holds. We can also see that there is a linear relationship between our x and y variable by looking at our residual plot. Also, the residual plot shows us that there is a similar amount of variance across all x values, so our data is homoskedastic.

9. C. There is also a need for a confidence interval in this hypothesis test. That way we can see if 0 is contained in the confidence interval. If it is, then we would be unable to reject the null hypothesis, if it is not, then we would reject the null hypothesis in favor of the alternate.