The Professor Swims

Parameter: $\beta =$ true slope of the population regression line relating swim time to pulse rate

Hypothesis:
$H_0 : \beta = 0$
$H_a : \beta < 0$

Assess Conditions: Stated

Name the Test: $t$ test for the slope $\beta$

Test statistic: $t = -5.13$

Obtain P-value: $p$-value = 0.0000

Make a Decision: Since the $p$-value is zero, which is less than 0.05 we reject the null hypothesis

State a Conclusion: Therefore, we can conclude that there is convincing evidence of a negative linear relationship between swim time and pulse rate.