1. Fill in the blanks. Suppose the probability of a baseball player getting a hit in an at bat is 0.3038. If the player bats 28 times during a week, his number of hits should be around give or take . Assume each at bat is independent.
   A. 2.4335 , 8.506  
   B. 8.506 , 5.9219 
   C. 8.506 , 2.4335 
   D. 28 , 2.4335 
   E. 8.506 , 0.3038 

2. Suppose that the probability of a baseball player getting a hit in an at bat is 0.3179. If the player has 36 at bats during a week, what’s the probability that he gets greater than 20 hits?
   A. 0.9991 
   B. 0.0018 
   C. 0.0009 
   D. 0.0045 
   E. 0.0027 

3. The stock price for International Business Machines (IBM) historically has followed an approximately normal distribution (when adjusting for inflation) with a mean of $158.936 and standard deviation of $4.4899. What is the probability that on a selected day the stock price is below $156.71?
   A. 0.69 
   B. 0.31 
   C. 0.1691 
   D. 0.8309 
   E. We do not have enough information to calculate the value.
4. Suppose that the mean and standard deviation of the number of gallons of milk sold at a local supermarket per day are 208.112 and 14.9951, respectively. Fill in the blank: the supermarket will sell less than _______ gallons of milk on 8.67% of days. Assume the distribution is approximately normal.

   A. 514.22
   B. 97.99
   C. 228.53
   D. We do not have enough information to calculate the value.
   E. 187.7

5. Consumers Energy states that the average electric bill across the state is $50.68. You want to test the claim that the average bill amount is actually less than $50.68. What are the appropriate hypotheses for this test?

   A. \( H_0: \mu < 50.68, H_A: \mu \geq 50.68 \)
   B. \( H_0: \mu > 50.68, H_A: \mu \leq 50.68 \)
   C. \( H_0: \mu \geq 50.68, H_A: \mu < 50.68 \)
   D. \( H_0: \mu = 50.68, H_A: \mu \neq 50.68 \)
   E. \( H_0: \mu \leq 50.68, H_A: \mu > 50.68 \)

6. It is reported in USA Today that the average flight cost nationwide is $495.12. You have never paid close to that amount and you want to perform a hypothesis test that the true average is actually greater than $495.12. The hypotheses for this situation are Null Hypothesis: \( \mu \leq 495.12 \), Alternative Hypothesis: \( \mu > 495.12 \). You take a random sample of national flight cost information and perform a one sample mean hypothesis test. You observe a \( p \)-value of 0.124. What is the appropriate conclusion? Conclude at the 5% level of significance.

   A. We did not find enough evidence to say the true average flight cost is greater than $495.12.
   B. The true average flight cost is significantly greater than $495.12.
   C. We did not find enough evidence to say the true average flight cost is less than $495.12.
   D. We did not find enough evidence to say a significant difference exists between the true average flight cost and $495.12.
   E. The true average flight cost is less than or equal to $495.12.

7. Automobile manufacturers are interested in the difference in reaction times for drivers reacting to traditional incandescent lights and to LED lights. A sample of 18 drivers are told to press a button as soon as they see a light flash in front of them and the reaction time was measured in milliseconds. Each driver was shown each type of light. The average difference between the
two reaction times (traditional - LED) was 92.59 ms with a standard deviation of 24.238 ms. Calculate a 95% confidence interval for the average difference in the reaction times to the two types of light for all drivers.

A. (80.588, 104.592)
B. (-80.537, 104.643)
C. (90.48, 94.7)
D. (80.537, 104.643)
E. (86.877, 98.303)

8. Is there a significant difference between the cost of a flight on Priceline.com vs. the Airline’s own website? A random sample of 26 flights were tracked on Priceline and the flight’s airline website and the 90% confidence interval for the mean difference in price (Priceline - Airline Site) was (-156.35, -51.74). Which of the following is the appropriate conclusion?

A. We are 90% confident that the average difference in price is negative, with the higher price coming from the Airline sites
B. We are 90% confident that the average difference in price is negative, with the higher price coming from Priceline.
C. We are 90% confident that the average difference in price is positive, with the higher price coming from Priceline.
D. We are 90% confident that the average difference in price is positive, with the higher price coming from the Airline sites
E. There is no significant difference between the average price for the booking options

9. Your friend tells you that the proportion of active Major League Baseball players who have a batting average greater than .300 is greater than 0.73, a claim you would like to test. The hypotheses for this test are Null Hypothesis: \( p \leq 0.73 \), Alternative Hypothesis: \( p > 0.73 \). If you randomly sample 26 players and determine that 14 of them have a batting average higher than .300, what is the test statistic and \( p \)-value?

A. Test Statistic: 2.2, \( p \)-value: 0.014
B. Test Statistic: -2.2, \( p \)-value: 1.972
C. Test Statistic: 2.2, \( p \)-value: 0.986
D. Test Statistic: -2.2, \( p \)-value: 0.014
E. Test Statistic: -2.2, \( p \)-value: 0.986

10. As of 2012, the proportion of students who use a MacBook as their primary computer is 0.49. You believe that at your university the proportion is actually less than 0.49. The hypotheses for this scenario are Null Hypothesis: \( p \geq 0.49 \), Alternative Hypothesis: \( p < 0.49 \). You conduct a
random sample and run a hypothesis test yielding a \( p \)-value of 0.0279. What is the appropriate conclusion? Conclude at the 5% level of significance.

A. We did not find enough evidence to say the proportion of students that use a MacBook as their primary computer is less than 0.49.
B. The proportion of students that use a MacBook as their primary computer is significantly less than 0.49.
C. The proportion of students that use a MacBook as their primary computer is significantly larger than 0.49.
D. The proportion of students that use a MacBook as their primary computer is significantly different from 0.49.
E. The proportion of students that use a MacBook as their primary computer is greater than or equal to 0.49.

11. A statistics professor wants to examine the number of hours that seniors and freshmen study for the final. Specifically, the professor wants to test if the average number of hours that seniors study is less than the average number of hours that freshmen study. If the seniors are considered group 1, and the freshmen are considered group 2, what are the hypotheses for this scenario?

A. \( H_0: \mu_1 = \mu_2, H_A: \mu_1 \neq \mu_2 \)
B. \( H_0: \mu_1 \leq \mu_2, H_A: \mu_1 > \mu_2 \)
C. \( H_0: \mu_1 \geq \mu_2, H_A: \mu_1 < \mu_2 \)
D. \( H_0: \mu_1 > \mu_2, H_A: \mu_1 \leq \mu_2 \)
E. \( H_0: \mu_1 < \mu_2, H_A: \mu_1 \geq \mu_2 \)

12. Do sit down restaurant franchises and fast food franchises differ significantly in stock price? Specifically, is the average stock price for sit-down restaurants greater than the average stock price for fast food restaurants? If sit down restaurants are in group 1 and fast food restaurants are in group 2, the hypotheses for this scenario are Null Hypothesis: \( \mu_1 \leq \mu_2 \), Alternative Hypothesis: \( \mu_1 > \mu_2 \). In a random sample of 37 sit down restaurants, you find that the average stock price is $125.216 with a standard deviation of $26.1814. For 52 fast food restaurants, the average stock price is $136.315 with a standard deviation of $8.0644. Conduct a two independent sample \( t \)-test. What is the test statistic and \( p \)-value for this test? Assume the population standard deviations are the same.

A. Test Statistic: -2.877, \( p \)-value: 0.0025
B. Test Statistic: 2.877, \( p \)-value: 0.0025
C. Test Statistic: -2.877, \( p \)-value: 0.9975
D. Test Statistic: -2.877, \( p \)-value: 1.995
E. Test Statistic: 2.877, \( p \)-value: 0.9975
13. The owner of a local golf course wants to examine the difference between the average ages of males and females that play on the golf course. Specifically, he wants to test if the average age of males is less than the average age of females. If the owner conducts a 2 sample \( t \)-test and calculates a \( p \)-value of 0.0375, what is the appropriate conclusion? Label males as group 1 and females as group 2. (Use a 5 \% level of significance.)

A. The average age of males is significantly larger than the average age of females.
B. We did not find enough evidence to say the average age of males is less than the average age of females.
C. The average age of males is significantly less than the average age of females.
D. The average age of males is significantly different from the average age of females.
E. The average age of males is greater than or equal to the average age of females.

14. A marketing research firm wanted to determine whether an individual’s favored Age Group and Social Network were related. For age they grouped by 8-17, 18-34, 35-55, and 55+, and the social networks they investigated were Facebook, Google+, and Twitter. To test at the 0.1 level to determine if age group and social network are dependent, what are the appropriate hypotheses?

A. Two of the other options are both correct.
B. \( H_0: \) Age Group and Social Network are not related to each other.  
   \( H_A: \) Age Group and Social Network are associated with each other.
C. \( H_0: \) Age Group and Social Network are not related to each other.  
   \( H_A: \) Age Group and Social Network display a negative correlation.
D. \( H_0: \) Age Group and Social Network are dependent on one another.  
   \( H_A: \) Age Group and Social Network are independent of each other.
E. \( H_0: \) Age Group and Social Network are independent of one another.  
   \( H_A: \) Age Group and Social Network display a positive correlation.
15. A political poll asked potential voters if they felt the economy was going to get worse, stay the same, or get better during the next 12 months. The party affiliations of the respondents were also noted. The results are shown in the following table. To test at the 0.01 level to determine if party affiliation and response are dependent, calculate the chi-squared test statistic and p-value.

<table>
<thead>
<tr>
<th>Party Affiliation</th>
<th>Worse</th>
<th>Same</th>
<th>Better</th>
</tr>
</thead>
<tbody>
<tr>
<td>Independent</td>
<td>27</td>
<td>51</td>
<td>32</td>
</tr>
<tr>
<td>Republican</td>
<td>29</td>
<td>48</td>
<td>52</td>
</tr>
<tr>
<td>Democrat</td>
<td>14</td>
<td>17</td>
<td>17</td>
</tr>
</tbody>
</table>

A. The test statistic is $\chi^2 = 4.355$, the degrees of freedom is 9, and the $p$-value is 0.8865.
B. The test statistic is $\chi^2 = 0.069$, the degrees of freedom is 4, and the $p$-value is 0.6399.
C. None of the other options are fully correct.
D. The test statistic is $\chi^2 = 4.355$, the degrees of freedom is 4, and the $p$-value is 0.0100.
E. The test statistic is $\chi^2 = 4.355$, the degrees of freedom is 4, and the $p$-value is 0.3601.
16. A marketing research firm wanted to determine whether an individual’s favored Age Group and Social Network were related. For age they grouped by 8-17, 18-34, 35-55, and 55+, and the social networks they investigated were Facebook, Google+, and Twitter. The table below presents their findings. To test at the 0.05 level to determine if age group and social network are dependent, calculate the chi-squared test statistic and p-value.

<table>
<thead>
<tr>
<th>Cross Tabulation of Age Group vs. Social Network</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facebook</td>
</tr>
<tr>
<td>55+</td>
</tr>
<tr>
<td>35-55</td>
</tr>
<tr>
<td>18-34</td>
</tr>
<tr>
<td>8-17</td>
</tr>
</tbody>
</table>

A. The test statistic is $\chi^2 = 29.928$, the degrees of freedom is 6, and the p-value is 0.9978.
B. The test statistic is $\chi^2 = 20.543$, the degrees of freedom is 6, and the p-value is 0.0022.
C. The test statistic is $\chi^2 = 20.543$, the degrees of freedom is 6, and the p-value is 0.0500.
D. The test statistic is $\chi^2 = 20.543$, the degrees of freedom is 12, and the p-value is 0.0575.
E. None of the other options are fully correct.
17. A marketing research firm wanted to determine whether an individual’s favored Social Network and Age Group were related. For age they grouped by 8-17, 18-34, 35-55, and 55+, and the social networks they investigated were Facebook, Google+, and Twitter. The table below presents their findings. Identify the correct conclusion using the 0.01 level of significance.

A. We find that social network and age group are not related to one another, based on a \( p \)-value of 1.0000
B. There is not enough information to make a conclusion.
C. We decide that social network and age group are related to each other, based on a \( p \)-value of 1.0000
D. We conclude that social network and age group are dependent on each other, based on a \( p \)-value of 0.0000
E. We determine that social network and age group are independent of one another, based on a \( p \)-value of 0.0000
18. Suppose the Federal Aviation Administration (FAA) would like to compare the on-time performances of different airlines on domestic, nonstop flights. The following table shows three different airlines and the frequency of flights that arrived early, on-time, and late for each. Identify the correct conclusion using the 0.05 level of significance.

![Cross Tabulation of Airline vs. Status](image)

- **Pearson Chi-square = 11.836**
- **DF = 4**
- **P-value = 0.0186**

A. We decide that airline and status are not related to one another, based on a p-value of 0.0186

B. We decide that airline and status are independent of each other, based on a p-value of 0.9814

C. We decide that airline and status are related to one another, based on a p-value of 0.0186

D. We decide that airline and status are associated with each other, based on a p-value of 0.9814

E. There is not enough information to make a conclusion.
19. You notice that the type of phone someone has and the computer operating system they use seems to be related. Based on a sample, you make the following tabulation. Is there a relationship between phone type and computer operating system choices? What is the appropriate conclusion at the 0.1 level of significance?

![Cross Tabulation of Phone vs. Computer OS]

**Pearson Chi-square = 12.008**

DF = 4

P-value = 0.0173

A. We conclude that Phone and Computer OS are dependent on each other, based on a *p*-value of 0.9827.

B. We conclude that Phone and Computer OS are associated with one another, based on a *p*-value of 0.0173.

C. There are two correct answers.

D. We find that Phone and Computer OS are not related to each other, based on a *p*-value of 0.0173.

E. We decide that Phone and Computer OS are independent of each other, based on a *p*-value of 0.9827.
20. Suppose that for a typical FedEx package delivery, the cost of the shipment is a function of the weight of the package measured in ounces. You want to try to predict the cost of a typical shipment given package dimensions. If 10 packages in a city are sampled and the regression output is given below, report the regression equation.

\[
\text{Predictor} \quad \text{Coeff} \quad \text{Stdev} \quad \text{t-ratio} \quad \text{P}
\]

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>5.479</td>
<td>2.3578</td>
<td>2.32</td>
<td>0.0486</td>
</tr>
<tr>
<td>weight</td>
<td>0.617</td>
<td>0.0967</td>
<td>6.38</td>
<td>2e-04</td>
</tr>
</tbody>
</table>

\[
s = 1.757 \quad \text{R-sq} = 83.55\% \quad \text{R-sq(adj)} = 81.5\%
\]

**Analysis of Variance**

<table>
<thead>
<tr>
<th>SOURCE</th>
<th>DF</th>
<th>SS</th>
<th>MS</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>1</td>
<td>125.5</td>
<td>125.5</td>
<td>40.64</td>
<td>2e-04</td>
</tr>
<tr>
<td>Error</td>
<td>8</td>
<td>24.7</td>
<td>3.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>9</td>
<td>150.2</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

A. \(\text{(cost of delivery)} = 0.617\times\text{(weight)}\)

B. \(\text{(weight)} = 5.479\times\text{(cost of delivery)} + 0.617\)

C. \(\text{(weight)} = 0.617\times\text{(cost of delivery)} + 5.479\)

D. \(\text{(cost of delivery)} = 5.479\times\text{(weight)} + 0.617\)

E. \(\text{(cost of delivery)} = 0.617\times\text{(weight)} + 5.479\)

21. Suppose that for a typical FedEx package delivery, the cost of the shipment is a function of the weight of the package. You find out that the regression equation for this relationship is \(\text{(cost of delivery)} = 2.258\times\text{(weight)} + 2.448\). If a package you want to ship weighs 28.205 ounces, what would you expect to pay for the shipment?

A. 11.41

B. 63.69

C. 71.3

D. 66.13

E. We do not know the observations in the data set, so we cannot answer that question.
22. While attempting to measure it’s risk exposure for the upcoming year, an insurance company notices a trend between the age of a customer and the number of claims per year. It appears that the number of claims keep going up as customers age. After performing a regression, they find that the relationship is (claims per year) = 0.451*(age) + 3.307. If a customer is 45.804 years old and they make an average of 12.518 claims per year, what is the residual?

A. -33.294
B. -11.455
C. 33.294
D. 11.455
E. 21.839

23. While attempting to measure its risk exposure for the upcoming year, an insurance company notices a trend between the age of a customer and the number of claims per year. It appears that the number of claims keep going up as customers age. After performing a regression, they find that the relationship is (claims per year) = 0.12*(age) + 4.55. If a customer is 32.524 years old and they make an average of 8.35 claims per year, the residual is -0.103. Interpret this residual in terms of the problem.

A. The age is 0.103 years less than what we would expect.
B. The age is 0.103 years larger than what we would expect.
C. The number of claims per year is 0.103 claims less than what we would expect.
D. The number of claims per year is 8.35 claims less than what we would expect.
E. The number of claims per year is 0.103 claims greater than what we would expect.

24. Suppose that in a certain neighborhood, the cost of a home is proportional to the size of the home in square feet. If the regression equation quantifying this relationship is found to be (cost) = 80.19*(size) + 610.129, what does the slope indicate?

A. When size increases by 1 square foot, cost increases by 80.19 dollars.
B. When cost increases by 1 dollar, size increases by 80.19 square feet.
C. When cost increases by 1 dollar, size increases by 610.129 square feet.
D. We are not given the dataset, so we cannot make an interpretation.
E. When size increases by 1 square foot, cost increases by 610.129 dollars.
25. You work for a company in the marketing department. Your manager has tasked you with forecasting sales by month for the next year. You notice that over the past 12 months sales have consistently gone up in a linear fashion, so you decide to run a regression the company’s sales history. If 10 months are sampled and the regression output is given below, what can we conclude about the slope of time? (Use a 5 % level of significance.)

<table>
<thead>
<tr>
<th>Predictor</th>
<th>Coef</th>
<th>Stdev</th>
<th>t-ratio</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>676.507</td>
<td>30.7655</td>
<td>21.99</td>
<td>0</td>
</tr>
<tr>
<td>time</td>
<td>21.383</td>
<td>6.5893</td>
<td>3.25</td>
<td>0.0118</td>
</tr>
</tbody>
</table>

\[ s = 28.223 \quad \text{R-sq} = 56.83\% \quad \text{R-sq(adj)} = 51.43\% \]

**Analysis of Variance**

<table>
<thead>
<tr>
<th>SOURCE</th>
<th>DF</th>
<th>SS</th>
<th>MS</th>
<th>F</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>1</td>
<td>8388.3</td>
<td>8388.3</td>
<td>10.53</td>
<td>0.0118</td>
</tr>
<tr>
<td>Error</td>
<td>8</td>
<td>6372.4</td>
<td>796.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>9</td>
<td>14760.8</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

A. Not enough evidence was found to conclude the slope differs significantly from 0.
B. The slope significantly differs from 0.
C. Since we are not given the dataset, we do not have enough information to determine if the slope differs from 0.
D. The slope is 21.383 and therefore differs from 0.
E. The slope is equal to 0.
26. You work for a parts manufacturing company and are tasked with exploring the wear lifetime of a certain bearing. You gather data on oil viscosity used and load. You see the regression output given below. Interpret the slope of the viscosity variable.

<table>
<thead>
<tr>
<th>Predictor</th>
<th>Coef</th>
<th>Stdev</th>
<th>t-ratio</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>135.342</td>
<td>87.81</td>
<td>1.54</td>
<td>0.1492</td>
</tr>
<tr>
<td>viscosity</td>
<td>6.279</td>
<td>1.095</td>
<td>5.73</td>
<td>9.411e-05</td>
</tr>
<tr>
<td>load</td>
<td>0.038</td>
<td>0.075</td>
<td>0.5</td>
<td>0.6247</td>
</tr>
</tbody>
</table>

$$\text{s} = 24.668$$  
$$\text{R-sq} = 73.3\%$$  
$$\text{R-sq(adj)} = 68.85\%$$

### Analysis of Variance

<table>
<thead>
<tr>
<th>SOURCE</th>
<th>DF</th>
<th>SS</th>
<th>MS</th>
<th>F</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>2</td>
<td>20049.08</td>
<td>10024.54</td>
<td>16.47</td>
<td>0.000362</td>
</tr>
<tr>
<td>Error</td>
<td>12</td>
<td>7302.09</td>
<td>608.51</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>14</td>
<td>27351.17</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

A. We do not have enough information to say.
B. When viscosity increases by 1 unit, lifetime decreases by 6.279 months, holding all other variables constant.
C. When viscosity decreases by 1 unit, lifetime increases by 6.279 months, holding all other variables constant.
D. When viscosity increases by 6.279 units, lifetime increases by 1 month, holding all other variables constant.
E. When viscosity increases by 1 unit, lifetime increases by 6.279 months, holding all other variables constant.
27. Suppose that a researcher wants to predict the weight of female college athletes based on their height, percent body fat, and age. A sample is taken and the following regression table is produced. What is the regression equation?

![Regression Table]

- A. \((\text{height}) = 2.333 \times (\text{percent body fat}) - 0.597 \times (\text{weight}) - 8.107 \times (\text{age}) + 259.698\)
- B. \((\text{weight}) = 2.333 \times (\text{height}) - 0.597 \times (\text{percent body fat}) - 8.107 \times (\text{age}) + 259.698\)
- C. We do not have enough information to determine the regression equation.
- D. \((\text{weight}) = 1.335 \times (\text{height}) - 2.355 \times (\text{percent body fat}) - 5.798 \times (\text{age})\)
- E. \((\text{weight}) = 1.335 \times (\text{height}) - 2.355 \times (\text{percent body fat}) - 5.798 \times (\text{age}) + 259.698\)

28. Suppose that a researcher studying the weight of female college athletes wants to predict the weights based on height, measured in inches, the percentage of body fat of an athlete, and age. The researcher calculates the regression equation as \((\text{weight}) = 3.471 \times (\text{height}) + 0.62 \times (\text{percent body fat}) - 1.115 \times (\text{age}) - 84.358\). If a female athlete is 67 inches tall, has a 18 percentage of body fat, and is 23 years old, what is her expected weight?

- A. 133.714
- B. -5.985
- C. 218.072
- D. We do not know the observations in the data set, so we cannot answer that question.
- E. 302.43
29. A trucking company considered a multiple regression model for relating the dependent variable of total daily travel time for one of its drivers (hours) to the predictors distance traveled (miles) and the number of deliveries of made. After taking a random sample, a multiple regression was performed and the equation is \( \text{(time)} = 0.067 \times \text{(distance)} + 1.465 \times \text{(deliveries)} - 0.591 \). Suppose for a given driver’s day, he is scheduled to drive 112.136 miles and make 12.676 stops. Suppose it took him 12.325 hours to complete the trip. What is the residual based on the regression model?

A. -86.6435  
B. We do not know the observations in the data set, so we cannot answer that question.  
C. 13.7585  
D. 13.1675  
E. -13.1675

30. Cardiorespiratory fitness is widely recognized as a major component of overall physical well-being. Direct measurement of maximal oxygen uptake (VO2max) is the single best measure of such fitness, but direct measurement is time-consuming and expensive. It is therefore desirable to have a prediction equation for VO2max in terms of easily obtained quantities. If a sample is taken and variables measured are age (years), time necessary to walk 1 mile (mins), and heart rate at the end of the walk (BPM) in addition to the VO2max uptake. The following output is from a multiple regression. Based on the \( F \)-test alone, what is the correct conclusion about the regression slopes? (Use a 5 percent level of significance.)

A. All the regression slopes do not equal zero.  
B. All the regression slopes are equal to zero.  
C. At least one of the regression slopes do not equal zero.  
D. We did not find significant evidence to conclude that at least one slope differs from zero.  
E. We do not have the dataset, therefore, we are unable to make a conclusion about the slopes.

<table>
<thead>
<tr>
<th>Predictor</th>
<th>Coef</th>
<th>Stdev</th>
<th>t-ratio</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>-33.326</td>
<td>32.698</td>
<td>-1.02</td>
<td>0.33</td>
</tr>
<tr>
<td>age</td>
<td>-0.117</td>
<td>0.242</td>
<td>-0.49</td>
<td>0.6384</td>
</tr>
<tr>
<td>HR</td>
<td>0.297</td>
<td>0.233</td>
<td>1.28</td>
<td>0.2274</td>
</tr>
<tr>
<td>time</td>
<td>-0.385</td>
<td>0.634</td>
<td>-0.64</td>
<td>0.5531</td>
</tr>
</tbody>
</table>

\(s = 7.935\)  
\(R\text{-sq} = 16.69\%\)  
\(R\text{-sq(adj)} = -6.04\%\)

<table>
<thead>
<tr>
<th>Analysis of Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOURCE</td>
</tr>
<tr>
<td>Regression</td>
</tr>
<tr>
<td>Error</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

A. All the regression slopes do not equal zero.  
B. All the regression slopes are equal to zero.  
C. At least one of the regression slopes do not equal zero.  
D. We did not find significant evidence to conclude that at least one slope differs from zero.  
E. We do not have the dataset, therefore, we are unable to make a conclusion about the slopes.