You want to know if there is a difference in price between imported and domestic beers. You go to your local supermarket and record the sales price and country of origin of 68 different beers. A t-test is run, the results of which appear below.

|  |  |  |
| --- | --- | --- |
| t-Test: Two-Sample | | |
|  | *import* | *domestic* |
| Mean | 5.862666667 | 4.728679 |
| Variance | 0.815392381 | 2.205523 |
| Observations | 15 | 53 |
| Hypothesized Mean Difference | 0 |  |
| df | 66 |  |
| t Stat | 3.660440824 |  |
| P(T<=t) one-tail | 0.000381141 |  |
| t Critical one-tail | 1.685953066 |  |
| P(T<=t) two-tail | 0.000762281 |  |
| t Critical two-tail | 2.024394234 |  |

1. Why would it be better to use a one-tailed test in this case?
2. You selected a one-tailed test, what are the null and experimental hypotheses (H0 and H1)?
3. In the beer price study, what is the critical value of t used in a one-tailed test?
4. Is there a significant difference between the price of domestic versus imported beers? What does this mean?

Descriptive statistics for both prices of beers were calculated. The results showed the following:

|  |  |  |
| --- | --- | --- |
| *imports* | *imports* | *domestic* |
| Mean | 5.862666667 | 4.728679 |
| Median | 5.68 | 4.1 |
| Mode | 5.99 | 4.02 |
| Standard Deviation | 0.902990798 | 1.4851 |
| Range | 3.17 | 5.43 |
| Minimum | 4.63 | 2.36 |
| Maximum | 7.8 | 7.79 |
| Count | 15 | 53 |
| Confidence Level(95.0%) | 0.500060081 | 0.409344 |

9. What is the one **BEST** measure of central tendency (mean, median, or mode) to use for these data?