Exercises:

1. In a one-tailed test using the z distribution as the test statistic and the .01 significance level, what is the critical value?
2. As the sample size increases, the t-distribution approaches what value?
3. An ANOVA test was conducted with respect to the population mean. The null hypothesis was rejected. What does this indicate?

Problem:

1. It was hypothesized that road construction workers do not engage in productive work 20 minutes on average out of every hour. Some claimed the nonproductive time is greater than 20 minutes. An actual study was conducted at the construction site, using a stopwatch and other ways of checking the work habits. A random check of workers revealed the following unproductive times, in minutes, during a one hour period (exclusive of regularly scheduled breaks): Refer to the table of values (times) listed below.

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| 10, 25, 17, 20, 28, 30, 18, 23, 18 |

1. Using the .05 significance level, is it reasonable to conclude the mean unproductive time is greater than 20 minutes?