Statistics worksheet 3

1. B
2. C
3. A
4. A
5. C
6. B
7. B
8. D
9. A
10. Bayes theorem describes the probability of an event, based on prior knowledge of conditions that might be related to the event.
    Ex: If the risk of developing health problems is known to increase with age, bayes theorem allows the risk to an individual of a known age to be assessed more accurately by conditioning it relative to their age, rather than simply assuming that the individual is typical of the population as a whole.
11. Z-score is a statistical measurement that describes a value's relationship to the mean of a group of values. Z-score is measured in terms in of standard deviations from the mean. If a Z-score is 0, it indicates that the data points score is identical to the mean score. A Z-score of 1.0 would indicate a value that is one standard deviation from the mean. Z-scores may be positive or negative, with a positive value indicating the score is above the mean and a negative score indicating it is below the mean.
12. A t-test is a statistical test that is used to compare the means of two groups. It is often used in hypothesis testing to determine whether a process or treatment actually has an effect on the population of interest, or whether two groups are different from one another.
13. Percentile or centile is a value or number that represents a percentage position on a range or list of data-the person or thing at that number of value is above that number in percentage.
14. ANOVA(Analysis of Variance) is a collection of statistical models and their associated estimation procedures (such as variation among and between groups) used to analyze the differences among means. ANOVA is based on the law of total variance, where the observed variance in a particular variable is partitioned into components attributable to different sources of variation.
15. ANOVA can help with process improvement by identifying areas where you must make changes. In particular, ANOVA can help identify the sources of variation in a process to make progress. Additionally, ANOVA can help identify the impact of changes on the process. This information can improve the process and ensure that the changes have the desired effect.