

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 occurrence of an event related to any condition. It is also considered for the case of conditional probability. Bayes theorem is also known as the formula for the probability of "causes". For example: if we have to calculate the probability of taking a blue ball from the second bag out of three different bags of balls, where each bag contains three different colour balls viz. red, blue, black. In this case, the probability of occurrence of an event is calculated depending on other conditions is known as conditional probability.
11. **z-score (also called a *standard score*)** gives you an idea of how far from the [mean](#) a data point is. But more technically it's a measure of how many standard deviations below or above the population mean a raw score is. A z-score can be placed on a normal distribution curve. Z-scores range from -3 standard deviations (which would fall to the far left of the normal distribution curve) up to +3 standard deviations (which would fall to the far right of the normal distribution curve). In order to use a z-score, you need to know the mean μ and also the population standard deviation σ .
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 is defined as the value below which a given percentage falls under. For example, in a group of 20 children, rahul is the 4th tallest and 80% of the children are shorter than you. Hence, it means that rahul is at the 80th percentile. It is most commonly used in competitive exams such as SAT, LSAT, etc.
14. An ANOVA test is a way to find out if survey or experiment results are significant. In other words, they help us to figure out if you need to reject the null hypothesis or accept the alternate hypothesis. Basically, you're testing groups to see if there's a difference between them. Examples of when you might want to test different groups:
 - A group of psychiatric patients are trying three different therapies: counseling, medication and biofeedback. You want to see if one therapy is better than the others.
 - A manufacturer has two different processes to make light bulbs. They want to know if one process is better than the other.
15. ANOVA is helpful for testing three or more variables. It is similar to multiple two-sample t-tests. However, it results in fewer type I errors and is appropriate for a range of issues. ANOVA groups differences by comparing the means of each group and includes spreading out the variance into diverse sources.