

Finding Probabilities

1. A critical dimension was produced in a particular machining station. Data collected from the samples had Mean = 20.2 ; SD=0.01
 - a. If 20.222 is USL, what % is likely to be rejected
 - b. For a trial batch, you want only components with dimensions between 20.18 & 20.22. What % of components are you likely to get?
 - c. If wish to have 99.9% acceptable rate from this process, what should be USL?

Binomial Distribution

2. There is 1% probability of detecting an error in a transaction by the checker (inspector) in transaction processing team. Every day 150 transactions are processed.
 - a. Quality Head wants to the probability that there will be any errors in a given day?
 - b. What is the probability of 2 or more errors in a given day?

Identifying Distributions

3. The data for installation of broad band services at customer location is collected. Based on the data, identify the respective distribution for each of the parameter. **(Source: Distribution_Telecom data_Practicefile)**

Poisson Distribution

4. The “No of installations in queue” is measured hourly (so every data point is per hour data) in attached file. **(Source: Distribution_Telecom data_Practicefile)**. What is the probability that there will be 17 installations in queue in any given hour?
 - a. What is the probability that there will be just 3 installations in queue?
 - b. If you were to create capacity of the downstream process based on the number of installations in queue, at 95% how many installations should be serviced by downstream process to attain nearly a single piece flow (no waiting)?