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**Statistcis Tasks**

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**Task 1**

**There are more sampling techniques, the sampling techniques are divided into two categories** [**Probability sampling and non-probability sampling**](https://www.healthknowledge.org.uk/public-health-textbook/research-methods/1a-epidemiology/methods-of-sampling-population).

Probability Sampling Methods

1. Simple random sampling
2. **Systematic sampling**
3. Stratified sampling
4. Clustered sampling

Non-Probability Sampling Methods

1. Convenience sampling
2. **Quota sampling**
3. **Snowball sampling**

**Task 2**

We shouldn’t to remove the outliters, If the outlier creates a relationship where there isn't one otherwise, Your results are critical, so even small changes will matter a lot. For example, you can feel better about dropping outliers about people’s favorite TV shows, not about the temperatures at which airplane seals fail. or There are a lot of outliers. Outliers are rare by definition. If, for example, 30% of your data is outliers, then it actually means that there’s something interesting going on with your data that you need to look further into.

**Task 3**

**There are more types of distributions like :**

1. normal distribution
2. chi square distribution
3. binomial distribution
4. Poisson distribution

**Task 4**

By appling z score we can convert any distrubtion type to normal distrubtion. The standard normal distribution (z distribution) is a normal distribution with a mean of 0 and a standard deviation of 1. Any point (x) from a normal distribution can be converted to the standard normal distribution (z) with the formula z = (x-mean) / standard deviation. z for any particular x value shows how many standard deviations x is away from the mean for all x values. For example, if 1.4m is the height of a school pupil where the mean for pupils of his age/sex/ethnicity is 1.2m with a standard deviation of 0.4 then z = (1.4-1.2) / 0.4 = 0.5, i.e. the pupil is half a standard deviation from the mean

**Task 5**