**Distributions Used for Hypothesis Tests**

**Normal distribution (Z distributions)**

Hypothesis Testing for a Single Population Mean is known = Z-Test

1. You are given the sample standard deviation
2. You are given the population standard deviation
3. The problem deals with means, not percentages

**Population standard deviation will always be used to determine the distribution even if the sample standard deviation is given.**

*The homework will ask for the z distribution or the distribution written as :*

*Z ~ N (mean from hypotheses,* $\frac{population standard devation}{\sqrt{sample size}}$*)*

**Student’s t-distribution**

Hypothesis Testing for Population Means σ is unknown = T-Test

1. You are given the sample standard deviation
2. You are NOT given the population standard deviation
3. The problem deals with means, not percentages

*Since the population standard deviation is not given, you have to use the sample standard deviation.*

*The homework will ask for the t distribution or the distribution written as :*

$t\_{df}$ *where df is degrees of freedom (or sample size -1)*