Test of Hypothesis

4. Compute **Test Statistics** (based on sample information) from the following formulas.

a. $z = \dfrac{\sqrt{n}(\bar{x} - \mu)}{s}$ To test the Mean (μ) for large sample sizes or when σ is known

TI-83/84 *stat* → *test* → *Option 1* → ***select*** *stats* ***then*** *input the asked info*

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b. $t = \dfrac{\sqrt{n}(\bar{x} - \mu)}{s}$ To test the Mean (μ) for $n \leq 30$ and σ is unknown

TI-83/84 *stat* → *test* → *Option 2* → ***select*** *stats* ***then*** *input the asked info*

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c. $Z = \dfrac{\hat{p} - p}{\sqrt{\dfrac{p(1-p)}{n}}}$ To test population proportion (**P**)

TI-83/84 *stat* → *test* → *Option 5* → ***select*** *stats* ***then*** *input the asked info*

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d. $Z = \dfrac{(\bar{x}_1 - \bar{x}_2) - (\mu_1 - \mu_2)}{\sqrt{\dfrac{s_1^2}{n_1} + \dfrac{s_2^2}{n_2}}}$ Two independent population μ_1, μ_2

TI-83/84 *stat* → *test* → *Option 3* → ***select*** *stats* ***then*** *input the asked info*

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e. $t = \dfrac{\sqrt{n}(\bar{d} - \mu_d)}{s_d}$ For **P**aired **S**amples

TI-83/84 *First input the* ***d-values*** *in* ***L1*** ***then*** *stat* → *test* → *Option 2* → ***select*** *data*

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f. $\chi^2 = \sum \dfrac{(O-E)^2}{E}$ **O**bserved, **E**xpected, for **M**ultinomial or **I**ndependency Test

TI-83/84

Input **O**bserved values into L1 and **E**xpected Values into L2 and **then** go to the top of L3 and write $(L_1 - L_2)^2 / L_2$ → *stat* → *Calc* → *Option 1* → L_3 → *enter* **then** $\sum X$ *is the answer*