Confidence Interval & TI

1. Population Proportion:

Confidence Interval:

      a) STAT   **TESTS**   **1-PropZInt**

      b) Enter values for x, n, and C-Level

      c) Calculate

Minimum Sample Size:

      a) PRGM   **PSZ**   **ENTER** to select, **ENTER** to run

      b) Follow instructions display on the screen.

2. Population Mean:

Confidence Interval:

      a) STAT TESTS

      b) ZInterval when σ is known, **TInterval** when σ is unknown

      c) Select **Data** when data is stored in a list otherwise select **Stats**

      d) Enter values as needed

      e) Calculate

Minimum Sample Size:

      a) PRGM   **MSZ**   **ENTER** to select, **ENTER** to run

      b) Follow instructions display on the screen.

$$E = \frac{\text{Interval Upper Limit} - \text{Interval Lower Limit}}{2}$$

3. Population Variance/Standard Deviation:

Confidence Interval:

      a) PRGM   **S2INT**   **ENTER** to select, **ENTER** to run

      b) Follow instructions display on the screen.

      c) Make sure to square the value of s_x by using x^2 key.

      d) Be patient, this may take sometime.

Minimum Sample Size:

   Please refer to table provided on the second page of the Sample Size Handout.

Critical Values

1. $z_{\alpha/2}$ where $\dfrac{\alpha}{2}$ is the area of one tail under the curve.

    a) Compute $1 - \dfrac{\alpha}{2}$

    b) 2nd   VARS   InvNorm(

    c) Now input $1 - \dfrac{\alpha}{2}, \ 0,1)$,then **ENTER**

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2. $t_{\alpha/2}$ where $\dfrac{\alpha}{2}$ is the area of right tail under the curve.

Case I: TI-83 or TI-84Users

    a) Compute α, and degrees of freedom $\mathrm{df} = n - 1$

    b) PRGM   TVAL   ENTER   ENTER

    c) Select 1: 1 TAIL TEST

    d) Now input α for **SIG.=** then **ENTER**

    e) Enter the $\mathrm{df} = n - 1$, followed by **ENTER**

Case II: Using Table A-3

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3. x_R^2 **&** x_L^2 where $\dfrac{\alpha}{2}$ is the area of one tail under the curve.

Case I: TI-83 or TI-84 Users

    a) Compute degrees of freedom $\mathrm{df} = n - 1$

    b) PRGM   X2VAL   ENTER   ENTER

    c) Input the degrees of freedom, then   **ENTER**

    d) Select **4:CONF. INTERVAL**

    e) Enter the confidence interval in decimals, then   **Enter**

    f) Be patient, x_L^2**=LEFT PT,** x_R^2**=RIGHT PT.**

Case II: Using Table A-4