Hypothesis Testing about a Mean Large Sample

Earthquakes occur at a mean depth of 5.0 km, as claimed by the Geology Club at ELAC. A sample of 200 Earthquakes reveal a mean of 4.6 km with a standard deviation of 0.8 km. Use the 5% level of significance to test this claim.

TI-83 or TI-84 Plus Finding the z vaue corresponding to a known area. 1. Press **2**nd then **vars** to access DISTR (distributions) menu. 2. Select **InvNorm** and click **enter**. 3. Enter the area, mean μ , enter the standard deviation σ , tail. 4. Paste. **InvNorm area: 0.95** μ : 0 σ : 1 Tail: Center



TI-84 Plus CE

1. Press **STAT**, then select **TESTS** in the top menu.

2. Select Z-Test in the menu and press ENTER.

3. Enter the Input: Stats, the claimed mean μ_0 , standard deviation σ , sample size n, alternate hypothesis type.

The mean IQ scores for College Professors is no more than 125 as claimed by the Faculty Association. A sample of 120 College Professors reveal a mean IQ score of 116 with a standard deviation of 8.5. Use the 1% level of significance to test this claim.





TI-84 Plus CE

1. Press **STAT**, then select **TESTS** in the top menu.

2. Select Z-Test in the menu and press ENTER.

3. Enter the Input: Stats, the claimed mean μ_0 , standard deviation σ , sample size n, alternate hypothesis type.

The mean pulse rate of adult males is at least 72 bpm (beats per minute) as claimed by the Nursing Association of America. A sample of 65 adult males pulse rates reveal a mean pulse rate of 75.5 bbm with a standard deviation of 6.6 bbm. Use the 10% level of significance to test this claim.

TI-83 or TI-84 Plus Finding the z vaue corresponding to a known area. 1. Press **2**nd then **vars** to access DISTR (distributions) menu. 2. Select **InvNorm** and click **enter**. 3. Enter the area, mean μ , enter the standard deviation σ , tail. 4. Paste. **InvNorm area: 0.10** μ : 0 σ : 1 Tail: Left



TI-84 Plus CE

1. Press **STAT**, then select **TESTS** in the top menu.

2. Select Z-Test in the menu and press ENTER.

3. Enter the Input: Stats, the claimed mean μ_0 , standard deviation σ , sample size n, alternate hypothesis type.

The mean lifespan of California resident's is 77.8 years as claimed by the State of California. A sample of 50 California residents reveal a mean lifespan of 76.2 years with a standard deviation of 9.8 years. Use the 1% level of significance to test this claim.

TI-83 or TI-84 Plus Finding the z vaue corresponding to a known area. 1. Press 2^{nd} then vars to access DISTR (distributions) menu. 2. Select **InvNorm** and click **enter**. 3. Enter the area, mean μ , enter the standard deviation σ , tail. 4. Paste. **InvNorm area: 0.99** μ : 0 σ : 1 Tail: Center



TI-84 Plus CE

1. Press **STAT**, then select **TESTS** in the top menu.

2. Select Z-Test in the menu and press ENTER.

3. Enter the Input: Stats, the claimed mean μ_0 , standard deviation σ , sample size n, alternate hypothesis type.

Insomnia treatment with Zopiclone induces a mean wake up time less than 103.2 minutes as claimed by Big Pharma. A sample of 120 insomnia patients treated with Zopiclone reveal a mean wake up time of 100.6 minutes with a standard deviation of 18.5 minutes. Use the 5% level of significance to test this claim.





TI-84 Plus CE

1. Press **STAT**, then select **TESTS** in the top menu.

2. Select Z-Test in the menu and press ENTER.

3. Enter the Input: Stats, the claimed mean μ_0 , standard deviation σ , sample size n, alternate hypothesis type.

The mean number of units college students take in a remote (online) learning environment is not 12 units as claimed by campus researchers. A sample of 350 college students reveal a mean of 10.5 units with a standard deviation of 2.3 units. Use the 10% level of significance to test this claim.

TI-83 or TI-84 Plus Finding the z vaue corresponding to a known area. 1. Press **2**nd then **vars** to access DISTR (distributions) menu. 2. Select **InvNorm** and click **enter**. 3. Enter the area, mean μ , enter the standard deviation σ , tail. 4. Paste. **InvNorm area: 0.90** μ : 0 σ : 1 Tail: Center



TI-84 Plus CE

1. Press **STAT**, then select **TESTS** in the top menu.

2. Select Z-Test in the menu and press ENTER.

3. Enter the Input: Stats, the claimed mean μ_0 , standard deviation σ , sample size n, alternate hypothesis type.