Examples for each of the test pages:

**\*Z\*-Test – Means**

The average quiz test taking time for a 10 item test is 22.5 minutes, with a standard deviation of 10 minutes. My class of 25 students took 19 minutes on the test with a standard deviation of 5.

**\*Z\* Test - \*Z\***

A recent study suggested that students (*N* = 100) learning statistics improved their test scores with the use of visual aids (*Z* = 2.5, *SD* = 4).

**Single Sample \*t\* - Means**

A school has a gifted/honors program that they claim is significantly better than others in the country. The national average for gifted programs is a SAT score of 1250. The data is included at [GitHub](<https://github.com/doomlab/shiny-server/tree/master/MOTE/examples>). Example output from JASP, SPSS, and SAS are shown below.

\*\*JASP\*\*

![Single t JASP](https://raw.githubusercontent.com/doomlab/shiny-server/master/MOTE/examples/single%20t%20JASP.png)

\*\*SPSS\*\*

![Single t SPSS](https://raw.githubusercontent.com/doomlab/shiny-server/master/MOTE/examples/single%20t%20SPSS.png)

\*\*SAS\*\*  
![Single t SAS](<https://raw.githubusercontent.com/doomlab/shiny-server/master/MOTE/examples/single%20t%20SAS.PNG>)

**Single Sample \*t\* - \*t\***

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\*\*SAS\*\*  
![Single t SAS](<https://raw.githubusercontent.com/doomlab/shiny-server/master/MOTE/examples/single%20t%20SAS.PNG>)

**Dependent \*t\* Averages – Means**

In a study to test the effects of science fiction movies on people's belief in the supernatural, seven people completed a measure of belief in the supernatural before and after watching a popular science fiction movie. Participants' scores are shown with high scores indicating high levels of belief. The data is included at [GitHub](<https://github.com/doomlab/shiny-server/tree/master/MOTE/examples>). Example output from JASP, SPSS, and SAS are shown below.

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\*\*SAS\*\*  
![Dependent t SAS](https://raw.githubusercontent.com/doomlab/shiny-server/master/MOTE/examples/dependent%20t%20SAS.PNG)

**Dependent \*t\* Differences – Means**

In a study to test the effects of science fiction movies on people's belief in the supernatural, seven people completed a measure of belief in the supernatural before and after watching a popular science fiction movie. Participants' scores are shown with high scores indicating high levels of belief. The data is included at [GitHub](<https://github.com/doomlab/shiny-server/tree/master/MOTE/examples>). Example output from JASP, SPSS, and SAS are shown below.

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\*\*SAS\*\*  
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**Dependent \*t\* Repeated Measures**

In a study to test the effects of science fiction movies on people's belief in the supernatural, seven people completed a measure of belief in the supernatural before and after watching a popular science fiction movie. Participants' scores are shown with high scores indicating high levels of belief. The data is included at [GitHub](<https://github.com/doomlab/shiny-server/tree/master/MOTE/examples>). Example output from JASP, SPSS, and SAS are shown below.

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\*\*SAS\*\*  
![Dependent t SAS](https://raw.githubusercontent.com/doomlab/shiny-server/master/MOTE/examples/dependent%20t%20SAS.PNG)

**Independent \*t\* - Means**

A forensic psychologist conducted a study to examine whether being hypnotized during recall affects how well a witness can remember facts about an event. Eight participants watched a short film of a mock robbery, after which each participant was questioned about what he or she had seen. The four participants in the experimental group were questioned while they were hypnotized and gave 14, 22, 18, and 17 accurate responses. The four participants in the control group gave 20, 25, 24, and 23 accurate responses. The data is included at [GitHub](<https://github.com/doomlab/shiny-server/tree/master/MOTE/examples>). Example output from JASP, SPSS, and SAS are shown below.

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\*\*SAS\*\*  
![Independent t SAS](https://raw.githubusercontent.com/doomlab/shiny-server/master/MOTE/examples/independent%20t%20SAS.PNG)

**Independent \*t\* - \*t\***

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\*\*SAS\*\*  
![Independent t SAS](https://raw.githubusercontent.com/doomlab/shiny-server/master/MOTE/examples/independent%20t%20SAS.PNG)

**Independent \*t\* Delta – Means**

A forensic psychologist conducted a study to examine whether being hypnotized during recall affects how well a witness can remember facts about an event. Eight participants watched a short film of a mock robbery, after which each participant was questioned about what he or she had seen. The four participants in the experimental group were questioned while they were hypnotized and gave 14, 22, 18, and 17 accurate responses. The four participants in the control group gave 20, 25, 24, and 23 accurate responses. The data is included at [GitHub](<https://github.com/doomlab/shiny-server/tree/master/MOTE/examples>). Example output from JASP, SPSS, and SAS are shown below.

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\*\*SPSS\*\*

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\*\*SAS\*\*  
![Independent t SAS](https://raw.githubusercontent.com/doomlab/shiny-server/master/MOTE/examples/independent%20t%20SAS.PNG)

**Independent \*t\* g – Means**

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\*\*SAS\*\*  
![Independent t SAS](https://raw.githubusercontent.com/doomlab/shiny-server/master/MOTE/examples/independent%20t%20SAS.PNG)

**Independent Proportions**

Several researchers were examining the data on the number of students who retake a course after they receive a D, F, or withdraw from the course. They randomly sampled form a large university two groups of students: traditional (less than 25 years old) and non-traditional (25 and older). Each group included 100 participants. The traditional group showed about 25% of students who would retake a course, while the non-traditional group showed about 35% would retake the course.