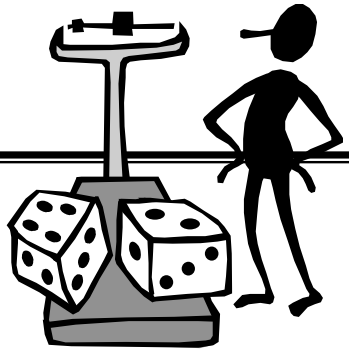
Chapter 23: Inferences About Means



Key Vocabulary:

- t-distribution
- t-table
- degrees of freedom
- one-sample t-interval
- one-sample t-test

Calculator Skills:

- T-Interval
- T-test
- tcdf (leftend, rightend, df)

1. What is the *standard deviation* of the sample mean $\bar{x}$?

2. What is the *standard error* of the sample mean $\bar{x}$?

3. Describe the similarities between a *standard normal distribution* and a *t distribution.*

4. Describe the differences between a *standard normal distribution* and a *t distribution.*

5. How do you calculate the *degrees of freedom* for a *t distribution*?

6. What happens to the *t distribution* as the *degrees of freedom* increase?

7. How would you construct a level C confidence interval for μ if σ is unknown?

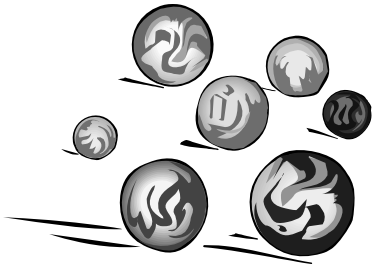
8. The *z*-Table gives the area under the standard normal curve to the left of *z*. What does the *t*-Table give?

9. Samples from normal distributions have very few outliers. If your data contains outliers, what does this suggest?

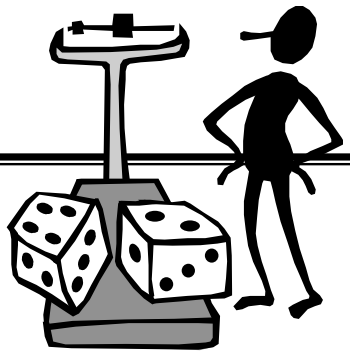
10. If the size of the SRS is less than 15, when can we use *t procedures* on the data?

11. If the size of the SRS is between 15 and 40, when can we use *t procedures* on the data?

12. If the size of the SRS is at least 40, when can we use *t procedures* on the data?



Chapter 24: Comparing Means



Key Vocabulary:

- two-sample t-interval
- two-sample t-test
- pooled t-test

Calculator Skills:

- 2-SampTInt
- 2-SampTTest

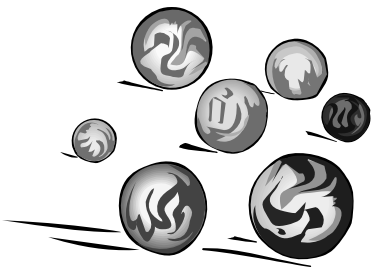
1. Describe the assumptions and conditions that must be met in order to use two-sample t-procedures.

2. In a two-sample problem, must/should the two sample sizes be equal?

3. In a two-sample problem, what is the null hypothesis for comparing two means?

4. Explain how to standardize $\overline{x}_1 - \overline{x}_2$ if σ_1 and σ_2 are unknown.

5. Explain why we ALWAYS pool our statistics when testing two proportions, but almost NEVER pool our statistics when testing two means.



Chapter 25: Paired Samples and Blocks

Key Vocabulary:

- paired t-test
- paired t-interval

1. Explain why a two-sample hypothesis test is not appropriate for paired data.

2. What type of test is used instead of a two-sample t-test?

3. What conditions and assumptions are necessary in order to use a paired t-test?

4. Explain how to construct a confidence interval for paired data.