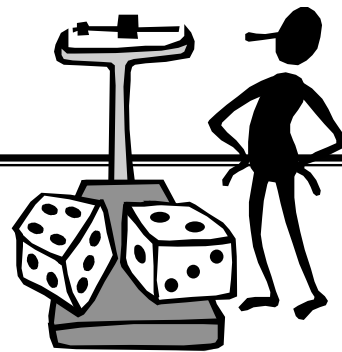


## Chapter 23: Inferences About Means



### 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?
2. What is the *standard error* of the sample mean?
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. What is the formula for a confidence interval for  $\mu$  if  $\sigma$  is unknown?

8. What are the conditions needed in order to use the *t procedures* on the data?
  
  
  
  
  
  
  
  
  
  
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?
  
  
  
  
  
  
  
  
  
  
13. What is the formula for a hypothesis test for  $\mu$  if  $\sigma$  is unknown?
  
  
  
  
  
  
  
  
  
  
14. How are confidence intervals and hypothesis tests related?

