

## I. What type of sample statistic are you being asked about?

	Count or Sum or Total	Proportion or Percentage (which is a proportion*100)	Mean or Average
Expected Value	Number of draws * box average (page 289)	Box percentage (page 359)	Box Average (page 410)
Standard Error	$\sqrt{\text{draws}} * SD_{\text{box}}$ (page 291)	$\frac{\sqrt{\text{draws}} * \sqrt{\text{fraction of 1's} * \text{fraction of 0's}}}{\text{draws}} * 100$ see page 360	$\frac{\sqrt{\text{draws}} * SD_{\text{box}}}{\text{draws}}$ (page 410)
Notes	The box could be a one-zero box, but generally it's a box that contains different kinds of numbers (see Chapter 17). Assumes sampling w/ replacement.	For one-zero boxes only. Assumes sampling w/ replacement.	Generally the average and SD are given and do not need to be calculated. Assumes sampling w/ replacement.

## II. How are you being asked to apply this statistic?

	Count or Sum or Total	Proportion or Percentage (which is a proportion*100)	Mean or Average
Using the normal curve (review Chapter 5)	Find a Z score then the area from Table A-105 using: $Z = \frac{\text{observed} - \text{expected}}{SE_{\text{sum}}}$ (page 294-296)	Find a Z score then the area from Table A 105 using: $Z = \frac{\text{observedpercentage} - \text{expectedpercentage}}{SE_{\text{percentage}}}$ (page 362-366)	Find a Z score then the area from Table A105 using: (page 410-411) $Z = \frac{\text{observedmean} - \text{expectedmean}}{SE_{\text{mean}}}$
Calculating confidence intervals	Not done in this textbook	Page 381: $\text{sample percentage} \pm \text{multiplier} * SE_{\text{percentage}}$	Page 416-417 $\text{sample average} \pm \text{multiplier} * SE_{\text{average}}$
Hypothesis Testing - use Z test	See Chapter 26.5	See Chapter 26.5	$Z_{\text{test}} = \frac{\text{observedmean} - \text{hypotheticalmean}}{SE_{\text{mean}}}$ use this to find the area from Table A105, area values as extreme or more extreme than the Z result are called "p-values" (page 482) p variables smaller than 5% are considered statistically significant and lead us to reject the null hypothesis (page 484)