I. Comparing two population means μ_1 & μ_2, or two binomial percentages p_1 & p_2, can be done provided that the:

(1) original/raw data are normally distributed;

OR

(2) original/raw data distribution is not highly skewed, and that the sampling distributions both have samples sizes no less than 30.

II. Difference of Population Means (pp.403-405):

E = critical value × standard deviation

$$\sigma = \sqrt{\frac{\sigma_1^2}{n_1} + \frac{\sigma_2^2}{n_2}}$$ (provided on tests) use s_1 & s_2 if σ_1 & σ_2 unknown

Confidence interval:

$$(\bar{x}_1 - \bar{x}_2) - E < \mu_1 - \mu_2 < (\bar{x}_1 - \bar{x}_2) + E$$

III. Difference of Binomial Percentages (p.409):

E = critical value × standard deviation

$$\bar{\sigma} = \sqrt{\frac{\bar{p}_1(1-\bar{p}_1)}{n_1} + \frac{\bar{p}_2(1-\bar{p}_2)}{n_2}}$$ (provided on tests)

Confidence interval:

$$(\bar{p}_1 - \bar{p}_2) - E < p_1 - p_2 < (\bar{p}_1 - \bar{p}_2) + E$$

VI. Examples (pp.412-421): #**4**,6,10,**16b**,28c

HW: pp.412-420 / #1,5,7,11,15,21,28a

Read pp.438-449 (section 8.1)