

this time: ANOVA

next time: categorical data

read: L-302 → (STAT) 3 Dec 19  
LN (322)

today: LN 11. L-269 (1)

$$SE(\bar{y}_1 - \bar{y}_2) =$$

IID,  
indep

$$\sqrt{\frac{s_1^2}{n_1} + \frac{s_2^2}{n_2}}$$

but if  $\sigma_1 = \sigma_2 = \dots = \sigma_I = \sigma$ ,

a better standard error is

to use  $SE(\bar{y}_i - \bar{y}_j) =$

IID,  
indep.  
equal SDs

$$\hat{\sigma} = s$$

$$= RMSE$$

$$= \sqrt{MS_w}$$

$$\sqrt{\frac{\hat{\sigma}^2}{n_i} + \frac{\hat{\sigma}^2}{n_j}}$$

$$= \hat{\sigma} \sqrt{\frac{1}{n_i} + \frac{1}{n_j}}$$