

this ANOVA
 time:
 next
 time (1 Dec)
 categorical data

read: LN pp.

(8.53)

AM59
 19 Nov 15

L-283 → L-301

①

this time: L-269 → 282

no Ans^② of any kind next

week

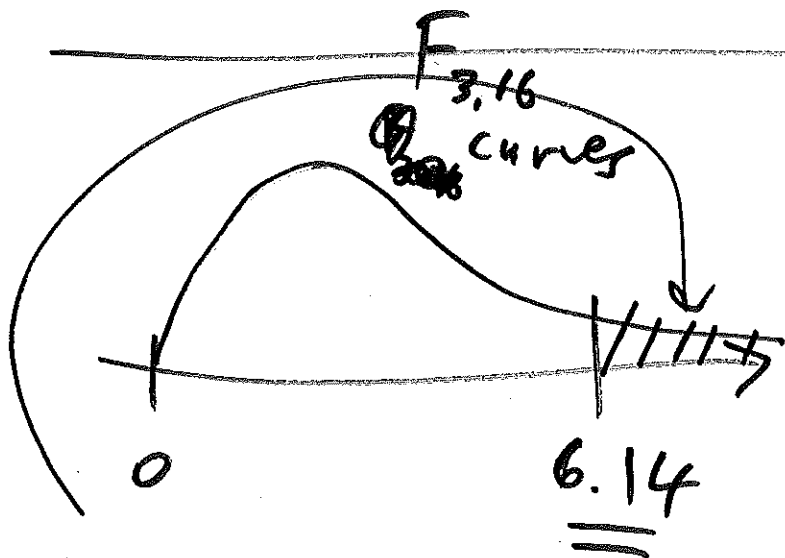
$\begin{bmatrix} 1 \\ 2 \\ 9 \end{bmatrix} n=3$

mean $\bar{y} = 4$

$\begin{bmatrix} \checkmark \\ \checkmark \\ X \end{bmatrix}$

mean $\boxed{4}$

with
 holes,
 there are
 (n-1) df
 for spread



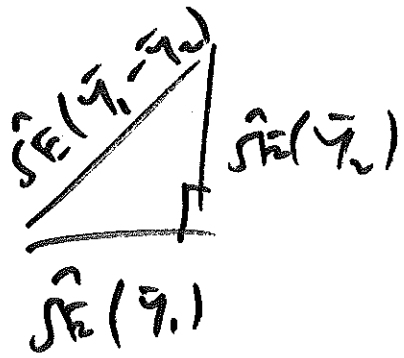
$P = 0.0056 \approx 0.6\%$

low run
 k.6t of
 F if
 n-1
 true

2-indep. samples:

group	n	\bar{y}	s
1	n_1	\bar{y}_1	s_1
2	n_2	\bar{y}_2	s_2

$$\hat{SE}(\bar{y}_1 - \bar{y}_2) = \sqrt{\frac{s_1^2}{n_1} + \frac{s_2^2}{n_2}}$$



$$= \sqrt{\left(\frac{s_1}{\sqrt{n_1}}\right)^2 + \left(\frac{s_2}{\sqrt{n_2}}\right)^2}$$

$$SE(\bar{y}_1) = \frac{\sigma}{\sqrt{n_1}}$$

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

$$SE(\bar{y}_2) = \frac{\sigma}{\sqrt{n_2}}$$

$$\sqrt{\frac{\sigma^2}{n_1} + \frac{\sigma^2}{n_2}}$$

now spse.

$$\sigma_1 = \sigma_2 = \sigma$$

$$SE(\bar{y}_1 - \bar{y}_2) = \sqrt{\frac{\sigma^2}{n_1} + \frac{\sigma^2}{n_2}}$$

$$= \sqrt{\sigma^2 \left(\frac{1}{n_1} + \frac{1}{n_2}\right)} = \sigma \sqrt{\frac{1}{n_1} + \frac{1}{n_2}}$$