DA02. JANUARY, 2018

Questions 3 and 4:

	SS	df	MS	F
BETW	160.44	(k-1) 2	80.22	1.693
WITH	710.66	k(n-1) 15	47.377	
TOTAL	871.1			

number of groups

(5) $F_{t(\alpha, k-1, k(n-1)} = F_t(0.05, 2, 15) = 3.68$

(6) Fcmp Ft

$1.693 < 3.68$ — (Ho) No statistically significant differences.

(7) $R^2 = \frac{SS_{exp}}{SS_T} = \frac{160.44}{871.66} = 0.18$

(8) Ho - non significant
$R^2 = 0.18 \rightarrow$ low
} the effect probably does not exist.

(12) $k-1 = 4-1 = 3$
↳ number of conditions in the IV.

(13) $(k-1)(n-1) = (4-1)(6-1) = 15$

(14) $c = \frac{SSB}{df_b} = \frac{177.864}{3} = 59.288$

(15) $e = \frac{MSb}{MSw} = \frac{59.288}{0.878} = 67.526$

$d = \frac{MSw}{df_w} = \frac{13.173}{15} = 0.878$

(16) $F_t(\alpha, (k-1), (k-1)(n-1) = F(0.05, 3, 15) = 3.29$

(17) Fcmp Ft
(18) 67.526 3.29 ⟶ Ho We have to do stage 2.

(19) $\varepsilon = 1/(k-1) = 1/(4-1) = 0.33$

(20) $df \cdot \varepsilon$

$3 \cdot 0.33 = 1$

$15 \cdot 0.33 = 5$

(21) Femp Ft(0.05, 1, 5) =

67.526 6.61 ——— H0 There is statistically significant differences between groups.

22-24 $\hat{y} = b_0 + b_1 X_1 + b_2 X_2 \rightarrow \hat{Y} = 165.75 + 24.88 X_1 + 9.25 X_2$

AMBIVERTS: $165.75 = b_0 + b_1 \cdot 0 + b_2 \cdot 0$

INTROVERTS: $190.63 = 165.75 + b_1 \cdot 1 + b_2 \cdot 0$

$190.63 - 165.75 = b_1$

$24.88 = b_1$

EXTROVERTS: $175 = 165.75 + 24.88 \cdot 0 + b_2 \cdot 1$

$175 - 165.75 = b_2$

$9.25 = b_2$

(25) $\hat{y} = 165.75 + 24.88 \cdot 0 + 9.25 \cdot 0 = 165.75$

$e = Y - \hat{Y} = 180 - 165.75 = 14.25$

(30) $R^2_{Y.12} = R^2_{Y1} + R^2_{Y(2.1)} = 0.581^2 + 0.738^2 = 0.338 + 0.545 = 0.883$