

Source	SS	df	MS	F
1) Between Treat.	384	2	192	96.00
Within Treat.	24	9		
Between Subjects	12	3		
Error	12	6	2	
TOTAL	408	11		

Source	SS	df	MS	F
Between Treat.	360	5		
Gender	72	1	72	9.00*
Treatments	252	2	126	15.75*
Gender x Treatments	36	2	18	2.25
Within Treat.	96	12	8	
TOTAL	456	17		

$F_{crit}(1,12) = 4.75$
 $F_{crit}(2,12) = 3.88$
 $F_{crit}(2,12) = 3.88$

- 2) Treatment 1: $F = 0$ Retain H_0 $F_{crit}(1,12) = 3.88$
 Treatment 2: $F = 54/8 = 6.75^*$ Reject H_0
 Treatment 3: $F = 54/8 = 6.75^*$ Reject H_0

3) $t = \frac{3.8}{1.5} = 2.53^*$ $t_{crit}(1-tailed) = 2.462$ Average age of the library books is greater than 20 years old.
 4) $S_p^2 = 64$ $S_{em} = 4.0$ $t = 11/4 = 2.75^*$ $df = 14$ $t_{crit} = 2.145$

Source	SS	df	MS	F
Between Treat.	32	2	16	4.00
Within Treat.	36	9	4	
Total	68	11		

$F_{crit}(2,9) = 4.26$ Retain H_0

6) $t = \frac{4.3}{1.45} = 2.97^*$ $df = 5$ $t_{crit} = \pm 2.571$ Reject H_0