

1 Problem

Table 1.1: Tableau

Z	x1	x2	x3	x4	S1	S2	S3	S4	A1	A2	A3	A4	RHS	BasicSolution	minratio
1	$-8M - 16$	-36	$8M - 64$	$-18M - 324$	M	0	M	0	0	0	0	0	0	Z = 0	minratio
0	4	-6	0	0	0	0	0	0	1	0	0	0	0	A1 = 0	minratio
0	0	6	-8	0	0	0	0	0	0	1	0	0	0	A2 = 0	minratio
0	4	0	0	0	-1	0	0	0	0	0	1	0	2	A3 = 2	minratio
0	4	0	0	0	0	1	0	0	0	0	0	0	10	S2 = 10	minratio
0	0	0	0	(18)	0	0	-1	0	0	0	0	1	2	A4 = 2	minratio
0	0	0	0	18	0	0	0	1	0	0	0	0	10	S4 = 10	minratio

Descriptive statistics of your k=4 independent treatments:

Treatment →	AC1	AC2	AC3	AC4	Pooled T
observations N	101	101	101	101	404
sum $\sum x_i$	961.4854	1,117.2210	650.8736	4,131.0253	6,860.605
mean \bar{x}	9.5197	11.0616	6.4443	40.9012	16.9817
sum of squares $\sum x_i^2$	9,195.8574	12,393.0952	4,201.5039	169,963.7484	195,754.2
sample variance s^2	0.4285	0.3485	0.0708	9.9969	196.6489
sample std. dev. s	0.6546	0.5903	0.2662	3.1618	14.0232
std. dev. of mean $SE_{\bar{x}}$	0.0651	0.0587	0.0265	0.3146	0.6977

Tukey HSD results

TreatmentsPair	Tukey HSD Q statistic	Tukey HSD p-value	Tukey HSD inference
AC1 vs AC2	9.4113	0.0010053	** p<0.01
AC1 vs AC3	18.7706	0.0010053	** p<0.01
AC1 vs AC4	191.5389	0.0010053	** p<0.01
AC2 vs AC3	28.1819	0.0010053	** p<0.01
AC2 vs AC4	182.1276	0.0010053	** p<0.01
AC3 vs AC4	210.3095	0.0010053	** p<0.01