

Final Exam

Stat 4/564
Fall 2014
due December 9

1. Find the best model for predicting Y based on X_1 and X_2 . Consider as predictors all possible linear and quadratic terms (X_1 , X_1^2 , X_2 , X_2^2 , and X_1X_2). Consider possible transformations of Y . Include all appropriate diagnostics. When you have found your “best” model, predict a new Y when $X_1 = 10$ and $X_2 = 50$, giving a 95% prediction interval.

Y	X1	X2
32906.80	1	107
2750.32	2	72
1641.66	3	142
1899.95	3	117
1805.24	4	68
1121.77	4	141
1351.93	4	112
1479.77	5	57
717.16	5	133
1115.66	6	57
1440.91	6	34
1915.12	6	7
1328.06	6	41
247.71	7	120
753.74	7	61
73.95	8	117
422.74	9	48
628.35	9	35
303.37	9	63
13.49	18	5

2. Do problems 7.13 and 7.14 on page 256.
3. Do problem 9.21(a) on page 325.