

n	p	k	$\psi$	TRMSE		Diff	
				Olsavs	Lasso	Olsavs	Lasso
100	20	1	0	1.0478	1.021	0.01657	0.1449
100	20	1	0.3	1.0417	1.0199	0.1124	0.1549
100	20	1	0.9	1.0083	1.0057	0.6455	0.6635
100	20	19	0	1.1112	1.1107	0.0037	0.0122
100	20	19	0.3	1.1112	1.1377	0.0055	0.0158
100	20	19	0.9	1.1543	2.3451	1.5667	7.5674
100	50	1	0	1.0916	1.0369	0.0268	0.181
100	50	1	0.3	1.0708	1.0303	0.1654	0.2028
100	50	1	0.9	1.0142	1.0059	0.9511	0.5929
100	50	49	0	1.3973	1.4014	0.0043	0.0149
100	50	49	0.3	1.5522	4.353	0.0163	0.0557
100	50	49	0.9	2.1118	9.4775	8.8016	43.9716
200	40	1	0	1.0386	1.0175	0.0225	0.1208
200	40	1	0.3	1.0316	1.0157	0.1044	0.1327
200	40	1	0.9	1.0108	1.005	0.7825	0.4165
200	40	39	0	1.117	1.119	0.002	0.0095
200	40	39	0.3	1.117	2.5606	0.0028	0.0369
200	40	39	0.9	1.6985	6.8533	5.8545	32.8388
200	100	1	0	1.0691	1.0261	0.0354	0.1454
200	100	1	0.3	1.0605	1.0251	0.1392	0.1653
200	100	1	0.9	1.0184	1.0045	0.9712	0.0855
200	100	99	0	1.4495	1.4561	0.0034	0.0132
200	100	99	0.3	3.166	11.4553	0.1379	0.488
200	100	99	0.9	3.7274	27.9646	17.4699	93.9076

Table 1: TRMSE and difference values for lasso for  $e_i \sim N(0, 1)$

n	p	k	$\psi$	TRMSE		Diff	
				Olsavs	Lasso	Olsavs	Lasso
100	20	1	0	1.3677	1.3362	0.0260	0.1882
100	20	1	0.3	1.3551	1.3317	0.1497	0.2031
100	20	1	0.9	1.3178	1.3169	0.6539	0.7482
100	20	19	0	1.4441	1.4442	0.0047	0.0130
100	20	19	0.3	1.4441	1.4590	0.0061	0.0142
100	20	19	0.9	1.4487	2.4245	1.8395	7.2843
100	50	1	0.3	1.3704	1.3311	0.2075	0.2549
100	50	1	0.9	1.3060	1.3015	0.9523	0.6991
100	50	49	0	1.8360	1.8418	0.0076	0.0076
100	50	49	0.3	1.9877	4.4636	0.0245	0.0245
100	50	49	0.9	2.2778	9.6242	8.8102	43.9438
200	40	1	0	1.3453	1.3165	0.0351	0.1550
200	40	1	0.3	1.3324	1.3163	0.1351	0.1707
200	40	1	0.9	1.3075	1.3033	0.8243	0.5671
200	40	39	0	1.4351	1.4355	0.0036	0.0107
200	40	39	0.3	1.4351	2.5826	0.0048	0.0376
200	40	39	0.9	1.8981	6.7108	5.7510	32.8242
200	100	1	0	1.3837	1.3189	0.0460	0.1847
200	100	1	0.3	1.3559	1.3153	0.1774	0.2115
200	100	1	0.9	1.3096	1.2998	1.1920	0.2210
200	100	99	0	1.8397	1.8487	0.0058	0.0147
200	100	99	0.3	3.3891	11.4710	0.1501	0.4976
200	100	99	0.9	3.8424	27.4098	17.2990	93.9071

Table 2: TRMSE and difference values for lasso for  $e_i \sim t_3$

n	p	k	$\psi$	TRMSE		Diff	
				Olsavs	Lasso	Olsavs	Lasso
100	20	1	0	1.0589	1.0366	0.0208	0.1416
100	20	1	0.3	1.0287	1.0099	0.1123	0.1533
100	20	1	0.9	0.9913	0.9900	0.6264	0.6519
100	20	19	0	1.1055	1.1063	0.0033	0.0118
100	20	19	0.3	1.1055	1.1583	0.0046	0.0148
100	20	19	0.9	1.1335	2.3835	1.5415	7.5833
100	50	1	0	1.0948	1.0456	0.0232	0.1804
100	50	1	0.3	1.0767	1.0414	0.1689	0.2039
100	50	1	0.9	1.0263	1.0188	0.9343	0.5814
100	50	49	0	1.4078	1.4105	0.0045	0.0147
100	50	49	0.3	1.5744	4.3752	0.0153	0.0520
100	50	49	0.9	2.1137	9.5345	8.8138	44.0251
200	40	1	0	1.0298	1.0071	0.0202	0.1201
200	40	1	0.3	1.0202	1.0037	0.1063	0.1331
200	40	1	0.9	0.9969	0.9925	0.7664	0.4067
200	40	39	0	1.1034	1.1048	0.0026	0.0097
200	40	39	0.3	1.1034	2.4771	0.0035	0.0380
200	40	39	0.9	1.7076	6.7040	5.8761	32.8648
200	100	1	0	1.0522	1.0122	0.0371	0.0371
200	100	1	0.3	1.0356	1.0101	0.1402	0.1657
200	100	1	0.9	1.0067	0.9953	0.9636	0.0896
200	100	99	0	1.4138	1.4192	0.0037	0.0131
200	100	99	0.3	3.1658	11.2754	0.1451	0.4836
200	100	99	0.9	3.6705	27.4919	17.5606	93.9063

Table 3: TRMSE and difference values for lasso for  $e_i \sim \exp(1) - 1$

n	p	k	$\psi$	TRMSE		Diff	
				Olsavs	Lasso	Olsavs	Lasso
100	20	1	0	0.6087	0.5952	0.0112	0.0843
100	20	1	0.3	0.6024	0.5945	0.0662	0.0900
100	20	1	0.9	0.5905	0.5879	0.5773	0.4067
100	20	19	0	0.6360	0.6369	0.0023	0.0103
100	20	19	0.3	0.6360	0.9626	0.0031	0.0308
100	20	19	0.9	0.7599	2.3075	1.3762	7.8005
100	50	1	0	0.6265	0.5999	0.0177	0.1043
100	50	1	0.3	0.6169	0.5955	0.0943	0.1160
100	50	1	0.9	0.5917	0.5826	0.7318	0.2120
100	50	49	0	0.8221	0.8299	0.0028	0.0127
100	50	49	0.3	1.0467	4.3592	0.0121	0.0573
100	50	49	0.9	1.9089	9.4600	9.0251	44.0993
200	40	1	0	0.6078	0.5907	0.0127	0.0697
200	40	1	0.3	0.6016	0.5904	0.0604	0.0760
200	40	1	0.9	0.5886	0.5836	0.4935	0.1028
200	40	39	0	0.6506	0.6506	0.0013	0.0088
200	40	39	0.3	0.6506	2.5639	0.0018	0.0388
200	40	39	0.9	1.4729	6.8174	5.9630	33.0055
200	100	1	0	0.6130	0.5903	0.0123	0.0831
200	100	1	0.3	0.5967	0.5967	0.0898	0.0973
200	100	1	0.9	0.5902	0.5830	0.5646	0.0216
200	100	99	0	0.8125	0.8243	0.0021	0.0119
200	100	99	0.3	2.9615	11.3001	0.1460	0.4744
200	100	99	0.9	3.5458	27.3187	17.4181	93.9087

Table 4: TRMSE and difference values for lasso for  $e_i \sim \text{uniform}(-1, 1)$

n	p	k	$\psi$	TRMSE		Diff	
				Olsavs	Lasso	Olsavs	Lasso
100	20	1	0	1.05004	1.03955	0.01180	0.04069
100	20	1	0.3	1.04307	1.03993	0.11183	0.11699
100	20	1	0.9	1.00809	1.00586	0.63942	0.67805
100	20	19	0	1.11518	1.11527	0.00315	0.00298
100	20	19	0.3	1.11518	1.12323	0.00384	0.00384
100	20	19	0.9	1.14518	1.44021	1.54564	7.55956
100	50	1	0	1.10563	1.08454	0.02597	0.05857
100	50	1	0.3	1.09096	1.08971	0.16601	0.16668
100	50	1	0.9	1.03093	1.02483	0.95682	0.60006
100	50	49	0	1.42151	1.42127	0.00415	0.00446
100	50	49	0.3	1.57851	3.89696	0.01567	0.01567
100	50	49	0.9	2.12296	4.80282	8.87674	45.66343
200	40	1	0	1.03855	1.03304	0.02126	0.02466
200	40	1	0.3	1.03295	1.03285	0.10517	0.10524
200	40	1	0.9	1.01005	1.00655	0.78436	0.42916
200	40	39	0	1.12531	1.12531	0.00267	0.00267
200	40	39	0.3	1.12531	1.80026	0.00386	0.12240
200	40	39	0.9	1.70105	3.57716	5.88467	33.41152
200	100	1	0	1.06191	1.05162	0.02599	0.03373
200	100	1	0.3	1.04883	1.04896	0.13610	0.13720
200	100	1	0.9	1.01643	1.00291	0.96788	0.96788
200	100	99	0	1.40641	1.40518	1.40518	0.00281
200	100	99	0.3	3.15561	10.08956	0.14074	0.92836
200	100	99	0.9	3.71833	9.86930	17.35998	97.95932

Table 5: TRMSE and difference values for relax lasso for  $e_i \sim N(0, 1)$

				TRMSE		Diff	
100	20	1	0	1.36487	1.34437	0.02908	0.08346
100	20	1	0.3	1.34847	1.34209	1.34209	0.15530
100	20	1	0.9	1.30332	1.30211	0.62132	0.74412
100	20	19	0	1.44316	1.44326	0.00553	0.00605
100	20	19	0.3	1.44316	1.44720	0.00764	0.03972
100	20	19	0.9	1.43871	1.65548	1.83681	7.26831
100	50	1	0	1.44446	1.40636	0.03604	0.10807
100	50	1	0.3	1.41096	1.40477	0.20648	0.21225
100	50	1	0.9	1.34176	1.33864	0.95980	0.71164
100	50	49	0	1.85165	1.85164	0.00554	0.00698
100	50	49	0.3	2.00740	4.14320	4.14320	4.14320
100	50	49	0.9	2.31574	4.91246	8.71224	45.59930
200	40	1	0	1.33118	1.31585	0.03086	0.05388
200	40	1	0.3	1.31769	1.31472	0.13591	0.13865
200	40	1	0.9	1.29278	1.28860	0.84014	0.58889
200	40	39	0	1.44431	1.44436	0.00272	0.00272
200	40	39	0.3	1.44431	2.02409	0.00388	0.13289
200	40	39	0.9	1.91426	3.72937	5.77462	33.17816
200	100	1	0	1.35272	1.32707	0.04958	0.07102
200	100	1	0.3	1.33008	1.32910	0.18092	0.18116
200	100	1	0.9	1.28972	1.27810	1.19952	0.21588
200	100	99	0	1.80251	1.80167	0.00513	0.00464
200	100	99	0.3	3.31817	10.32727	0.14145	0.92488
200	100	99	0.9	3.76114	9.86319	17.36192	97.95763

Table 6: TRMSE and difference values for relax lasso for  $e_i \sim EXP(1) - 1$