

# Resampling Methods—3<sup>rd</sup> Edition

## Data

### Chapter 2

**Exercise 6.** Below is the billing data from four Swedish hospitals. Obtain confidence intervals for the median and standard deviation of the bills at each hospital. Use as many methods for obtaining the CI's as are practical with the software at your disposal.

#### Hospital 1

64877, 21152, 11753, 1834, 3648, 12712, 11914, 14290, 17132, 7030, 23540, 5413, 4671, 39212, 7800, 10715, 11593, 3585, 12116, 8287, 14202, 4196, 22193, 3554, 3869, 3463, 2213, 3533, 3523, 10938, 3533, 3523, 10938, 17836, 3627, 30346, 2673, 3703, 28943, 8321, 19686, 18985, 2243, 4319, 3776, 3668, 11542, 14582, 9230, 7786, 7900, 7886, 67042, 7707, 18329, 7968, 5806, 5315, 11088, 6966, 3842, 13217, 13153, 8512, 8328, 207565, 2095, 18985, 2143, 7976, 2138, 15313, 8262, 9052, 8723, 4160, 7728, 3721, 18541, 7492, 18703, 6978, 10613, 15940, 3964, 10517, 13749, 24581, 3465, 11329, 7827, 3437, 4587, 14945, 23701, 61354, 3909, 14025, 21370, 4582, 4173, 4702, 7578, 5246, 3437, 10311, 8103, 11921, 10858, 14197, 7054, 4477, 4406, 19170, 81327, 4266, 2873, 7145, 4018, 13484, 7044, 2061, 8005, 7082, 10117, 2761, 7786, 62096, 11879, 3437, 17186, 18818, 4068, 10311, 7284, 10311, 10311, 24606, 2427, 3327, 3756, 3186, 2440, 7211, 6874, 26122, 5243, 4592, 11251, 4141, 13630, 4482, 3645, 5652, 22058, 15028, 11932, 3876, 3533, 31066, 15607, 8565, 25562, 2780, 9840, 14052, 14780, 7435, 11475, 6874, 17438, 1596, 10311, 3191, 37809, 13749, 6874, 6874, 2767, 138133

#### Hospital 2

4724, 3196, 3151, 5912, 7895, 19757, 21731, 13923, 11859, 8754, 4139, 5801, 11004, 3889, 3461, 3604, 1855

30 2 Estimating Population Parameters

#### Hospital 3

4181, 2880, 5670, 11620, 8660, 6010, 11620, 8600, 12860, 21420, 5510, 12270, 6500, 16500, 4930, 10650, 16310, 15730, 4610, 86260, 65220, 3820, 34040, 91270, 51450, 16010, v6010, 15640, 49170, 62200, 62640, 5880, 2700, 4900, 55820, 9960, 28130, 34350, 4120, 61340, 24220, 31530, 3890, 49410, 2820, 58850, 4100, 3020, 5280, 3160, 64710, 25070

#### Hospital 4

10630, 81610, 7760, 20770, 10460, 13580, 26530, 6770, 10790, 8660, 21740, 14520, 16120, 16550, 13800, 18420, 3780, 9570, 6420, 80410, 25330, 41790, 2970, 15720, 10460, 10170, 5330, 10400, 34590, 3380, 3770, 28070, 11010, 19550, 34830, 4400, 14070, 10220, 15320, 8510, 10850, 47160, 54930, 9800, 7010, 8320, 13660, 5850, 18660, 13030, 33190, 52700, 24600, 5180, 5320, 6710, 12180, 4400, 8650, 15930, 6880, 5430, 6020, 4320, 4080, 18240, 3920, 15920, 5940, 5310, 17260, 36370,

5510, 12910, 6520, 5440, 8600, 10960, 5190, 8560, 4050,  
 2930, 3810, 13910, 8080, 5480, 6760, 2800, 13980, 3720,  
 17360, 3770, 8250, 9130, 2730, 18880, 20810, 24950, 15710,  
 5280, 3070, 5850, 2580, 5010, 5460, 10530, 3040, 5320,  
 2150, 12750, 7520, 8220, 6900, 5400, 3550, 2640, 4110,  
 7890, 2510, 3550, 2690, 3370, 5830, 21690, 3170, 15360,  
 21710, 8080, 5240, 2620, 5140, 6670, 13730, 13060, 7750,  
 2620, 5750, 3190, 2600, 12520, 5240, 10260, 5330, 10660,  
 5490, 4140, 8070, 2690, 5280, 18250, 4220, 8860, 8200,  
 2630, 6560, 9060, 5270, 5850, 39360, 5130, 6870, 18870,  
 8260, 11870, 9530, 9250, 361670, 2660, 3880, 5890, 5560,  
 7650, 7490, 5310, 7130, 5920, 2620, 6230, 12640, 6500,  
 3060, 2980, 5150, 5270, 16600, 5880, 3000, 6140, 6790,  
 6830, 5280, 29830, 5320, 7420, 2940, 7730, 11630, 9480,  
 16240, 2770, 6010, 4410, 3830, 3280, 2620, 12240, 4120,  
 5030, 8010, 5280, 4250, 2770, 5500, 7910, 2830, 11940,  
 9060, 20130, 10150, 6850, 10160, 7970, 12960, 31550

## Chapter 5

Exercise 2.a.

Exercise 2.b

	Laboratory					
Date	A	B	C	D	E	F
1/1	221.1	208.8	211.1	208.3	221.1	224.2
½	224.2	206.9	198.4	214.1	208.8	206.9
1/3	217.8	205.9	213.0	209.1	211.1	198.4

	Laboratory					
Date	A	B	C	D	E	F
2/1	208.8	211.4	208.9	207.7	208.3	214.1
2/2	212.6	205.8	206.0	216.2	208.8	212.6
2/3	213.3	202.5	209.8	203.7	211.4	205.8

Exercise 6:

Trt	Initial	Final	Trt	Initial	Final
1	27.2	32.6	3	28.9	33.8
1	31.0	35.6	3	23.1	29.2
1	32.0	35.6	3	24.4	27.6
1	27.8	30.8	3	25.0	30.8

2	29.5	33.7	4	29.3	34.8
2	27.8	31.3	4	30.2	36.5
2	26.3	30.4	4	25.5	30.8
2	27.0	31.0	4	22.7	25.9

## Chapter 6

TABLE 6.17. Data gathered by Graubard and Korn[1987].						
	Maternal Alcohol Consumption (drinks/day)					
	0	<1	1 to 2	3-5	>6	Total
Malformation Absent	17066	14464	788	126	37	
Malformation Present	48	38	5	1	1	

### Exercise 11

	Time to First Promotion (months)		
	Long	Average	Short
Poorly Dressed	12	8	4
Well Dressed	18	25	20
Very Well Dressed	13	19	31

## Chapter 7

Observed data are:

t=	0	1	2	3	4	5
A1	6.81	6.16	5.92	5.86	5.80	5.39
A2	6.68	6.30	6.12	5.71	6.09	5.28
A3	6.34	6.22	5.90	5.38	5.20	5.46
A4	6.68	6.24	5.83	5.49	5.37	5.43
A5	6.79	6.28	6.23	5.85	5.56	5.38
A6	6.85	5.51	5.95	6.06	6.31	5.39
B1	6.64	5.91	5.59	5.41	5.24	5.23
B2	6.57	5.89	5.32	5.41	5.32	5.30
B3	6.84	6.01	5.34	5.31	5.38	5.45
B4	6.71	5.60	5.29	5.37	5.26	5.41
B5	6.58	5.63	5.38	5.44	5.17	5.62
B6	6.68	6.04	5.62	5.31	5.41	5.44

Table 7.1 Blue Grouse Migration Data

DIST	ELEV	SEX
800	0	F
6400	503	M
7800	488	M
10500	457	M
10600	610	M
11800	183	M
12500	549	M
14100	549	M
17400	671	M
29400	427	M
100	0	F
100	76	F
400	198	F
700	91	F
1300	213	F
5200	320	F
4400	-61	F
6700	305	F
8800	518	F
15100	360	F
28000	760	F

### Exercise 1

Id	bmpg1	ampg	rqi1	bmpg2	ampg2	rqi2
1	20	24	0	19	23.5	1
2	23	25	0	22	24.5	1
3	21	21	1	20	20.5	0
4	25	22	0	24	20.5	-1
5	18	23	1	17	22.5	1
6	17	18	-1	16	16.5	-1
7	18	17	0	17	16.5	0
8	24	28	1	23	27.5	0
9	20	24	0	19	23.5	1
10	24	27	0	22	25.5	0
11	23	21	0	22	20.5	0
12	19	23	1	18	22.5	1

## Chapter 8

TABLE 8.3. Registrants and Servings at Fawltly Towers

Registrants	Servings	Weather	Registrants	Servings	Weather
289	235	3	339	315	2
391	355	3	479	399	2

482	475	1	500	441	2
358	275	4	160	158	3
365	345	1	319	305	2
561	522	1	331	225	5

### Exercise 9

	0.301	0.602	0.903	1.204	1.505
males	17.1, 14.3, 21.6	24.5, 20.6, 23.8	27.7, 31.0, 29.4	28.6, 34.2, 37.3	33.3, 31.8, 40.2
females	18.5, 22.1, 15.3	23.6, 26.9, 20.2	24.3, 27.1, 30.1	30.3, 33.0, 35.8	32.6, 36.1, 30.5

### Exercise 10

4,1,28,120,3,1,1,0,1,0,709	10,1,29,130,1,0,0,0,1,2,1021
11,1,34,187,2,1,0,1,0,0,1135	13,1,25,105,3,0,1,1,0,0,1330
15,1,25,85,3,0,0,0,1,0,1474	16,1,27,150,3,0,0,0,0,0,1588
17,1,23,97,3,0,0,0,1,1,1588	18,1,24,128,2,0,1,0,0,1,1701
19,1,24,132,3,0,0,1,0,0,1729	20,1,21,165,1,1,0,1,0,1,1790
22,1,32,105,1,1,0,0,0,0,1818	23,1,19,91,1,1,2,0,1,0,1885
24,1,25,115,3,0,0,0,0,0,1893	25,1,16,130,3,0,0,0,0,1,1899
26,1,25,92,1,1,0,0,0,0,1928	27,1,20,150,1,1,0,0,0,2,1928
28,1,21,200,2,0,0,0,1,2,1928	29,1,24,155,1,1,1,0,0,0,1936
30,1,21,103,3,0,0,0,0,0,1970	31,1,20,125,3,0,0,0,1,0,2055
32,1,25,89,3,0,2,0,0,1,2055	33,1,19,102,1,0,0,0,0,2,2082
34,1,19,112,1,1,0,0,1,0,2084	35,1,26,117,1,1,1,0,0,0,2084
36,1,24,138,1,0,0,0,0,0,2100	37,1,17,130,3,1,1,0,1,0,2125
40,1,20,120,2,1,0,0,0,3,2126	42,1,22,130,1,1,1,0,1,1,2187
43,1,27,130,2,0,0,0,1,0,2187	44,1,20,80,3,1,0,0,1,0,2211
45,1,17,110,1,1,0,0,0,0,2225	46,1,25,105,3,0,1,0,0,1,2240
47,1,20,109,3,0,0,0,0,0,2240	49,1,18,148,3,0,0,0,0,0,2282
50,1,18,110,2,1,1,0,0,0,2296	51,1,20,121,1,1,1,0,1,0,2296
52,1,21,100,3,0,1,0,0,4,2301	54,1,26,96,3,0,0,0,0,0,2325
56,1,31,102,1,1,1,0,0,1,2353	57,1,15,110,1,0,0,0,0,0,2353
59,1,23,187,2,1,0,0,0,1,2367	60,1,20,122,2,1,0,0,0,0,2381
61,1,24,105,2,1,0,0,0,0,2381	62,1,15,115,3,0,0,0,1,0,2381
63,1,23,120,3,0,0,0,0,0,2410	65,1,30,142,1,1,1,0,0,0,2410
67,1,22,130,1,1,0,0,0,1,2410	68,1,17,120,1,1,0,0,0,3,2414
69,1,23,110,1,1,1,0,0,0,2424	71,1,17,120,2,0,0,0,0,2,2438
75,1,26,154,3,0,1,1,0,1,2442	76,1,20,105,3,0,0,0,0,3,2450
77,1,26,190,1,1,0,0,0,0,2466	78,1,14,101,3,1,1,0,0,0,2466
79,1,28,95,1,1,0,0,0,2,2466	81,1,14,100,3,0,0,0,0,2,2495
82,1,23,94,3,1,0,0,0,0,2495	83,1,17,142,2,0,0,1,0,0,2495
84,1,21,130,1,1,0,1,0,3,2495	85,0,19,182,2,0,0,0,1,0,2523
86,0,33,155,3,0,0,0,0,3,2551	87,0,20,105,1,1,0,0,0,1,2557
88,0,21,108,1,1,0,0,1,2,2594	89,0,18,107,1,1,0,0,1,0,2600
91,0,21,124,3,0,0,0,0,0,2622	92,0,22,118,1,0,0,0,0,1,2637
93,0,17,103,3,0,0,0,0,1,2637	94,0,29,123,1,1,0,0,0,1,2663
95,0,26,113,1,1,0,0,0,0,2665	96,0,19,95,3,0,0,0,0,0,2722

97,0,19,150,3,0,0,0,0,1,2733	98,0,22,95,3,0,0,1,0,0,2751
99,0,30,107,3,0,1,0,1,2,2750	100,0,18,100,1,1,0,0,0,0,2769
101,0,18,100,1,1,0,0,0,0,2769	102,0,15,98,2,0,0,0,0,0,2778
103,0,25,118,1,1,0,0,0,3,2782	104,0,20,120,3,0,0,0,1,0,2807
105,0,28,120,1,1,0,0,0,1,2821	106,0,32,121,3,0,0,0,0,2,2835
107,0,31,100,1,0,0,0,1,3,2835	108,0,36,202,1,0,0,0,0,1,2836
109,0,28,120,3,0,0,0,0,0,2863	111,0,25,120,3,0,0,0,1,2,2877
112,0,28,167,1,0,0,0,0,0,2877	113,0,17,122,1,1,0,0,0,0,2906
114,0,29,150,1,0,0,0,0,2,2920	115,0,26,168,2,1,0,0,0,0,2920
116,0,17,113,2,0,0,0,0,1,2920	117,0,17,113,2,0,0,0,0,1,2920
118,0,24,90,1,1,1,0,0,1,2948	119,0,35,121,2,1,1,0,0,1,2948
120,0,25,155,1,0,0,0,0,1,2977	121,0,25,125,2,0,0,0,0,0,2977
123,0,29,140,1,1,0,0,0,2,2977	124,0,19,138,1,1,0,0,0,2,2977
125,0,27,124,1,1,0,0,0,0,2922	126,0,31,215,1,1,0,0,0,2,3005
127,0,33,109,1,1,0,0,0,1,3033	128,0,21,185,2,1,0,0,0,2,3042
129,0,19,189,1,0,0,0,0,2,3062	130,0,23,130,2,0,0,0,0,1,3062
131,0,21,160,1,0,0,0,0,0,3062	132,0,18,90,1,1,0,0,1,0,3062
133,0,18,90,1,1,0,0,1,0,3062	34,0,32,132,1,0,0,0,0,4,3080
135,0,19,132,3,0,0,0,0,0,3090	136,0,24,115,1,0,0,0,0,2,3090
137,0,22,85,3,1,0,0,0,0,3090	138,0,22,120,1,0,0,1,0,1,3100
139,0,23,128,3,0,0,0,0,0,3104	140,0,22,130,1,1,0,0,0,0,3132
141,0,30,95,1,1,0,0,0,2,3147	42,0,19,115,3,0,0,0,0,0,3175
143,0,16,110,3,0,0,0,0,0,3175	144,0,21,110,3,1,0,0,1,0,3203
145,0,30,153,3,0,0,0,0,0,3203	146,0,20,103,3,0,0,0,0,0,3203
147,0,17,119,3,0,0,0,0,0,3225	148,0,17,119,3,0,0,0,0,0,3225
149,0,23,119,3,0,0,0,0,2,3232	150,0,24,110,3,0,0,0,0,0,3232
151,0,28,140,1,0,0,0,0,0,3234	154,0,26,133,3,1,2,0,0,0,3260
155,0,20,169,3,0,1,0,1,1,3274	156,0,24,115,3,0,0,0,0,2,3274
159,0,28,250,3,1,0,0,0,6,3303	160,0,20,141,1,0,2,0,1,1,3317
161,0,22,158,2,0,1,0,0,2,3317	162,0,22,112,1,1,2,0,0,0,3317
163,0,31,150,3,1,0,0,0,2,3321	164,0,23,115,3,1,0,0,0,1,3331
166,0,16,112,2,0,0,0,0,0,3374	167,0,16,135,1,1,0,0,0,0,3374
168,0,18,229,2,0,0,0,0,0,3402	169,0,25,140,1,0,0,0,0,1,3416
170,0,32,134,1,1,1,0,0,4,3430	172,0,20,121,2,1,0,0,0,0,3444
173,0,23,190,1,0,0,0,0,0,3459	174,0,22,131,1,0,0,0,0,1,3460
175,0,32,170,1,0,0,0,0,0,3473	176,0,30,110,3,0,0,0,0,0,3544
177,0,20,127,3,0,0,0,0,0,3487	179,0,23,123,3,0,0,0,0,0,3544
180,0,17,120,3,1,0,0,0,0,3572	181,0,19,105,3,0,0,0,0,0,3572
182,0,23,130,1,0,0,0,0,0,3586	183,0,36,175,1,0,0,0,0,0,3600
184,0,22,125,1,0,0,0,0,1,3614	185,0,24,133,1,0,0,0,0,0,3614
186,0,21,134,3,0,0,0,0,2,3629	187,0,19,235,1,1,0,1,0,0,3629
188,0,25,95,1,1,3,0,1,0,3637	189,0,16,135,1,1,0,0,0,0,3643
190,0,29,135,1,0,0,0,0,1,3651	191,0,29,154,1,0,0,0,0,1,3651
192,0,19,147,1,1,0,0,0,0,3651	193,0,19,147,1,1,0,0,0,0,3651
195,0,30,137,1,0,0,0,0,1,3699	196,0,24,110,1,0,0,0,0,1,3728
197,0,19,184,1,1,0,1,0,0,3756	199,0,24,110,3,0,1,0,0,0,3770
200,0,23,110,1,0,0,0,0,1,3770	201,0,20,120,3,0,0,0,0,0,3770
202,0,25,241,2,0,0,1,0,0,3790	203,0,30,112,1,0,0,0,0,1,3799
204,0,22,169,1,0,0,0,0,0,3827	205,0,18,120,1,1,0,0,0,2,3856
206,0,16,170,2,0,0,0,0,4,3860	207,0,32,186,1,0,0,0,0,2,3860
208,0,18,120,3,0,0,0,0,1,3884	209,0,29,130,1,1,0,0,0,2,3884

210,0,33,117,1,0,0,0,1,1,3912	211,0,20,170,1,1,0,0,0,0,3940
212,0,28,134,3,0,0,0,0,1,3941	213,0,14,135,1,0,0,0,0,0,3941
214,0,28,130,3,0,0,0,0,0,3969	215,0,25,120,1,0,0,0,0,2,3983
216,0,16,95,3,0,0,0,0,1,3997	217,0,20,158,1,0,0,0,0,1,3997
218,0,26,160,3,0,0,0,0,0,4054	219,0,21,115,1,0,0,0,0,1,4054
220,0,22,129,1,0,0,0,0,0,4111	221,0,25,130,1,0,0,0,0,2,4153
222,0,31,120,1,0,0,0,0,2,4167	223,0,35,170,1,0,1,0,0,1,4174
224,0,19,120,1,1,0,0,0,0,4238	225,0,24,116,1,0,0,0,0,1,4593

## Chapter 9

Table 9.1. The Iris Data

Species	sepal length	sepal width	petal length	petal width	Species	sepal length	sepal width	petal length	petal width
1	5.1	3.5	1.4	0.2	2	6.6	3	4.4	1.4
1	4.9	3	1.4	0.2	2	6.8	2.8	4.8	1.4
1	4.7	3.2	1.3	0.2	2	6.7	3	5	1.7
1	4.6	3.1	1.5	0.2	2	6	2.9	4.5	1.5
1	5	3.6	1.4	0.2	2	5.7	2.6	3.5	1
1	5.4	3.9	1.7	0.4	2	5.5	2.4	3.8	1.1
1	4.6	3.4	1.4	0.3	2	5.5	2.4	3.7	1
1	5	3.4	1.5	0.2	2	5.8	2.7	3.9	1.2
1	4.4	2.9	1.4	0.2	2	6	2.7	5.1	1.6
1	4.9	3.1	1.5	0.1	2	5.4	3	4.5	1.5
1	5.4	3.7	1.5	0.2	2	6	3.4	4.5	1.6
1	4.8	3.4	1.6	0.2	2	6.7	3.1	4.7	1.5
1	4.8	3	1.4	0.1	2	6.3	2.3	4.4	1.3
1	4.3	3	1.1	0.1	2	5.6	3	4.1	1.3
1	5.8	4	1.2	0.2	2	5.5	2.5	4	1.3
1	5.7	4.4	1.5	0.4	2	5.5	2.6	4.4	1.2
1	5.4	3.9	1.3	0.4	2	6.1	3	4.6	1.4
1	5.1	3.5	1.4	0.3	2	5.8	2.6	4	1.2
1	5.7	3.8	1.7	0.3	2	5	2.3	3.3	1
1	5.1	3.8	1.5	0.3	2	5.6	2.7	4.2	1.3
Species	sepal length	sepal width	petal length	petal width	Species	sepal length	sepal width	petal length	petal width
1	5.4	3.4	1.7	0.2	2	5.7	3	4.2	1.2
1	5.1	3.7	1.5	0.4	2	5.7	2.9	4.2	1.3
1	4.6	3.6	1	0.2	2	6.2	2.9	4.3	1.3
1	5.1	3.3	1.7	0.5	2	5.1	2.5	3	1.1
1	4.8	3.4	1.9	0.2	2	5.7	2.8	4.1	1.3
1	5	3	1.6	0.2	3	6.3	3.3	6	2.5
1	5	3.4	1.6	0.4	3	5.8	2.7	5.1	1.9
1	5.2	3.5	1.5	0.2	3	7.1	3	5.9	2.1
1	5.2	3.4	1.4	0.2	3	6.3	2.9	5.6	1.8
1	4.7	3.2	1.6	0.2	3	6.5	3	5.8	2.2
1	4.8	3.1	1.6	0.2	3	7.6	3	6.6	2.1

1	5.4	3.4	1.5	0.4	3	4.9	2.5	4.5	1.7
1	5.2	4.1	1.5	0.1	3	7.3	2.9	6.3	1.8
1	5.5	4.2	1.4	0.2	3	6.7	2.5	5.8	1.8
1	4.9	3.1	1.5	0.2	3	7.2	3.6	6.1	2.5
1	5	3.2	1.2	0.2	3	6.5	3.2	5.1	2
1	5.5	3.5	1.3	0.2	3	6.4	2.7	5.3	1.9
1	4.9	3.6	1.4	0.1	3	6.8	3	5.5	2.1
1	4.4	3	1.3	0.2	3	5.7	2.5	5	2
1	5.1	3.4	1.5	0.2	3	5.8	2.8	5.1	2.4
1	5	3.5	1.3	0.3	3	6.4	3.2	5.3	2.3
1	4.5	2.3	1.3	0.3	3	6.5	3	5.5	1.8
1	4.4	3.2	1.3	0.2	3	7.7	3.8	6.7	2.2
1	5	3.5	1.6	0.6	3	7.7	2.6	6.9	2.3
1	5.1	3.8	1.9	0.4	3	6	2.2	5	1.5
1	4.8	3	1.4	0.3	3	6.9	3.2	5.7	2.3
1	5.1	3.8	1.6	0.2	3	5.6	2.8	4.9	2
1	4.6	3.2	1.4	0.2	3	7.7	2.8	6.7	2
1	5.3	3.7	1.5	0.2	3	6.3	2.7	4.9	1.8
1	5	3.3	1.4	0.2	3	6.7	3.3	5.7	2.1
2	7	3.2	4.7	1.4	3	7.2	3.2	6	1.8
2	6.4	3.2	4.5	1.5	3	6.2	2.8	4.8	1.8
2	6.9	3.1	4.9	1.5	3	6.1	3	4.9	1.8
2	5.5	2.3	4	1.3	3	6.4	2.8	5.6	2.1
2	6.5	2.8	4.6	1.5	3	7.2	3	5.8	1.6
2	5.7	2.8	4.5	1.3	3	7.4	2.8	6.1	1.9
2	6.3	3.3	4.7	1.6	3	7.9	3.8	6.4	2
2	4.9	2.4	3.3	1	3	6.4	2.8	5.6	2.2
2	6.6	2.9	4.6	1.3	3	6.3	2.8	5.1	1.5
2	5.2	2.7	3.9	1.4	3	6.1	2.6	5.6	1.4
2	5	2	3.5	1	3	7.7	3	6.1	2.3
2	5.9	3	4.2	1.5	3	6.3	3.4	5.6	2.4
2	6	2.2	4	1	3	6.4	3.1	5.5	1.8
2	6.1	2.9	4.7	1.4	3	6	3	4.8	1.8
2	5.6	2.9	3.6	1.3	3	6.9	3.1	5.4	2.1
2	6.7	3.1	4.4	1.4	3	6.7	3.1	5.6	2.4
Species	sepal length	sepal width	petal length	petal width	Species	sepal length	sepal width	petal length	petal width
2	5.6	3	4.5	1.5	3	6.9	3.1	5.1	2.3
2	5.8	2.7	4.1	1	3	5.8	2.7	5.1	1.9
2	6.2	2.2	4.5	1.5	3	6.8	3.2	5.9	2.3
2	5.6	2.5	3.9	1.1	3	6.7	3.3	5.7	2.5
2	5.9	3.2	4.8	1.8	3	6.7	3	5.2	2.3
2	6.1	2.8	4	1.3	3	6.3	2.5	5	1.9
2	6.3	2.5	4.9	1.5	3	6.5	3	5.2	2
2	6.1	2.8	4.7	1.2	3	6.2	3.4	5.4	2.3
2	6.4	2.9	4.3	1.3	3	5.9	3	5.1	1.8

Consumer Survey



Purchase=c(6, 9, 8, 3, 5, 1, 3, 3, 7, 4, 2, 8, 6, 1, 3, 6, 1, 9, 9, 7, 9, 2, 2, 8, 8, 5, 1, 3, 7, 9, 3, 6, 9, 8, 5, 4, 8, 9, 6, 2, 8, 5, 6, 5, 5, 3, 7, 6, 4, 5, 9, 2, 8, 2, 8, 7, 9, 4, 3, 3, 4, 1, 3, 6, 6, 5, 2, 4, 2, 8, 7, 7, 6, 1, 1, 9, 4, 4, 6, 9, 1, 6, 9, 6, 2, 8, 6, 3, 5, 3, 6, 8, 2, 5, 6, 7, 7, 5, 7, 6, 3, 5, 8, 8, 1, 9, 8, 8, 7, 5, 2, 2, 3, 8, 2, 2, 8, 9, 5, 6, 7, 4, 6, 5, 8, 4, 7, 8, 2, 1, 7, 9, 7, 5, 5, 9, 9, 9, 7, 3, 8, 9, 8, 4, 8, 5, 5, 8, 4, 3, 7, 1, 2, 1, 1, 7, 5, 5, 1, 4, 1, 2, 9, 7, 6, 9, 9, 6, 5, 4, 3, 6, 6, 4, 5, 7, 2, 6, 5, 6, 3, 8, 2, 5, 3, 4, 2, 3, 8, 3, 9, 1, 3, 1, 2, 5, 1, 5, 6, 7, 1, 1, 1, 4, 4, 8, 4, 7, 4, 4, 2, 6, 6, 6, 7, 2, 9, 4, 1, 9, 3, 5, 7, 2, 2, 8, 9, 2, 4, 1, 7, 1, 3, 6, 2, 6, 2, 8, 4, 4, 1, 1, 2, 2, 8, 3, 3, 3, 1, 1, 6, 8, 3, 7, 5, 9, 8, 3, 5, 6, 3, 4, 6, 1, 1, 5, 6, 6, 9, 6, 9, 9, 6, 7, 3, 8, 4, 2, 6, 4, 8, 3, 3, 6, 4, 4, 9, 5, 6, 4, 5, 3, 3, 2, 5, 9, 5, 1, 3, 4, 3, 6, 8, 1, 5, 3, 4, 8, 2, 5, 3, 2, 3, 2, 5, 8, 3, 1, 6, 3, 7, 8, 9, 2, 3, 5, 7, 7, 3, 7, 3, 9, 2, 9, 3, 9, 2, 8, 9, 5, 1, 9, 9, 1, 8, 7, 1, 4, 9, 3, 4, 9, 1, 3, 9, 1, 5, 2, 7, 9, 6, 5, 7, 4, 6, 1, 4, 2, 7, 5, 4, 5, 9, 5, 5, 5, 2, 4, 1, 8, 7, 9, 6, 8, 1, 5, 9, 9, 9, 9, 1, 3, 3, 7, 2, 5, 6, 1, 5, 8)

Fashion=c(5, 6, 8, 2, 5, 2, 5, 1, 7, 3, 5, 5, 4, 3, 3, 5, 6, 3, 4, 3, 4, 6, 4, 6, 3, 6, 5, 4, 6, 5, 5, 3, 4, 4, 4, 3, 6, 2, 3, 4, 4, 4, 5, 2, 3, 4, 5, 5, 6, 4, 5, 5, 6, 3, 4, 4, 5, 8, 4, 5, 6, 4, 2, 5, 3, 6, 2, 3, 2, 5, 3, 5, 4, 4, 5, 4, 6, 6, 5, 8, 2, 6, 5, 6, 4, 7, 4, 5, 5, 3, 6, 6, 4, 5, 5, 4, 4, 4, 4, 3, 5, 3, 3, 5, 4, 4, 5, 7, 6, 6, 4, 4, 5, 5, 2, 2, 7, 5, 1, 6, 5, 4, 7, 7, 6, 5, 6, 3, 2, 4, 5, 3, 9, 4, 4, 6, 6, 6, 9, 4, 4, 3, 3, 3, 2, 4, 4, 5, 4, 6, 6, 3, 3, 3, 5, 4, 4, 5, 4, 6, 3, 4, 6, 3, 4, 6, 4, 5, 4, 3, 3, 6, 4, 3, 3, 4, 3, 1, 4, 5, 5, 6, 2, 6, 6, 5, 5, 3, 9, 3, 3, 1, 1, 4, 3, 3, 3, 7, 6, 6, 4, 4, 1, 3, 5, 5, 4, 6, 4, 5, 5, 4, 6, 5, 6, 2, 4, 4, 3, 8, 5, 3, 6, 5, 3, 5, 3, 3, 5, 3, 2, 2, 3, 5, 5, 5, 1, 6, 5, 1, 5, 4, 4, 3, 6, 4, 4, 5, 5, 4, 5, 5, 3, 7, 4, 7, 6, 1, 5, 4, 4, 4, 3, 3, 5, 4, 7, 4, 6, 7, 6, 4, 6, 3, 4, 4, 2, 6, 3, 6, 5, 2, 2, 5, 3, 4, 4, 4, 3, 2, 4, 6, 4, 6, 5, 6, 2, 4, 2, 3, 6, 2, 6, 5, 6, 4, 4, 4, 6, 5, 5, 1, 4, 5, 5, 4, 4, 2, 3, 6, 5, 5, 2, 2, 5, 2, 5, 4, 3, 8, 3, 6, 3, 4, 3, 6, 4, 3, 4, 2, 5, 6, 4, 5, 5, 6, 4, 6, 5, 4, 3, 8, 2, 5, 5, 3, 2, 3, 5, 4, 3, 4, 3, 5, 2, 3, 1, 4, 4, 6, 6, 6, 6, 6, 6, 4, 4, 3, 4, 4, 3, 3, 5, 4, 4, 5, 4, 6, 8, 3, 3, 5, 4, 5, 4, 5, 4, 4, 6, 6)

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5, 9, 4, 3, 6, 3, 4, 6)

Pollution=c(5, 7, 7, 4, 5, 1, 3, 6, 3, 5, 5, 6, 2, 2, 7, 2, 6, 7, 7, 5, 5, 5, 6, 8, 6, 4, 5, 1, 4, 6, 6,  
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6, 6, 9, 6, 3, 6, 3, 5, 7).



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A Practical Guide to Data Analysis

Good, P.I.

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