Assignment 1

PRADEEP REDDY KETHU

2022-09-25

##installed a ISLR Package ##created a new R-notebook file

## 1	9.50	138	73	11	276	120	Bad 42	17
## 2	11.22	111	48	16	260	83	Good 65	10
## 3	10.06	113	35	10	269	80	Medium 59	12

4 7.40 117 100 4 466 97 Medium 55 14 ##calling the ISLR library

library(ISLR) Carseats<-Carseats

##print and summary of cardataseats

summary(Carseats)

Sales CompPrice Income Advertising ## Min. : 0.000 Min. : 77 Min. : 21.00 Min. : 0.000 ## 1st Qu.: 5.390 1st Qu.:115 1st Qu.: 42.75 1st Qu.: 0.000 ## Median: 7.490 Median:125 Median: 69.00 Median: 5.000 ## Mean : 7.496 Mean :125 Mean : 68.66 Mean : 6.635 ## 3rd Qu.: 9.320 3rd Qu.:135 3rd Qu.: 91.00 3rd Qu.:12.000 ## Max. :16.270 Max. :175 Max. :120.00 Max. :29.000 ## Population Price ShelveLoc Education Age :25.00 Min. ## Min. : 10.0 Min. : 24.0 Bad : 96 Min. :10.0 ## 1st Qu.:139.0 1st Qu.:100.0 Good: 85 1st Qu.:39.75 1st Qu.:12.0 ## Median :272.0 Median :117.0 Medium:219 Median :54.50 Median:14.0 ## Mean :264.8 Mean :115.8 Mean :53.32 Mean :13.9 ## 3rd Qu.:398.5 3rd Qu.:131.0 3rd Qu.:66.00 3rd Qu.:16.0 ## Max. :509.0 Max. :191.0 Max. :80.00 Max. :18.0 ## Urban US ## No :118 No:142 ## Yes:282 Yes:258 ## ## ##

print(Carseats)

Sales CompPrice Income Advertising Population Price ShelveLoc Age Education

5 4.15 141 64 3 340 128 Bad 38 13 ## 6 10.81 124 113 13 501 72 Bad 78 16 ## 7 6.63 115 105 0 45 108 Medium 71 15

## 8	11.85	136	81	15	425	120	Good 67	10
## 9	6.54	132	110	0	108	124	Medium 76	10
## 10	4.69	132	113	0	131	124	Medium 76	17
## 11	9.01	121	78	9	150	100	Bad 26	10
## 12 13	1.96	117	94	4	503	94	Good 50	13
## 13	3.98	122	35	2	393	136	Medium 62	18
## 14 10	0.96	115	28	11	29	86	Good 53	18
## 15 11	1.17	107	117	11	148	118	Good 52	18
## 16	8.71	149	95	5	400	144	Medium 76	18
## 17	7.58	118	32	0	284	110	Good 63	13
## 18 12	2.29	147	74	13	251	131	Good 52	10
## 19 13	3.91	110	110	0	408	68	Good 46	17
## 20	8.73	129	76	16	58	121	Medium 69	12
## 21	6.41	125	90	2	367	131	Medium 35	18
## 22 12	2.13	134	29	12	239	109	Good 62	18
## 23	5.08	128	46	6	497	138	Medium 42	13
## 24	5.87	121	31	0	292	109	Medium 79	10
## 25 10	0.14	145	119	16	294	113	Bad 42	12
## 26 14	4.90	139	32	0	176	82	Good 54	11
## 27	8.33	107	115	11	496	131	Good 50	11
## 28	5.27	98	118	0	19	107	Medium 64	17
## 29	2.99	103	74	0	359	97	Bad 55	11
## 30	7.81	104	99	15	226	102	Bad 58	17
## 31 13	3.55	125	94	0	447	89	Good 30	12
## 32	8.25	136	58	16	241	131	Medium 44	18
## 33	6.20	107	32	12	236	137	Good 64	10
## 34	8.77	114	38	13	317	128	Good 50	16
## 35	2.67	115	54	0	406	128	Medium 42	17
## 36 13	1.07	131	84	11	29	96	Medium 44	17
## 37	8.89	122	76	0	270	100	Good 60	18

## 38	4.95	121	41	5	412	110	Medium 54	10
## 39	6.59	109	73	0	454	102	Medium 65	15
## 40	3.24	130	60	0	144	138	Bad 38	10
## 41	2.07	119	98	0	18	126	Bad 73	17
## 42	7.96	157	53	0	403	124	Bad 58	16
## 43 10	.43	77	69	0	25	24	Medium 50	18
## 44	4.12	123	42	11	16	134	Medium 59	13
## 45	4.16	85	79	6	325	95	Medium 69	13
## 46	4.56	141	63	0	168	135	Bad 44	12
## 47 12	.44	127	90	14	16	70	Medium 48	15
## 48	4.38	126	98	0	173	108	Bad 55	16
## 49	3.91	116	52	0	349	98	Bad 69	18
## 50 10	.61	157	93	0	51	149	Good 32	17
## 51	1.42	99	32	18	341	108	Bad 80	16
## 52	4.42	121	90	0	150	108	Bad 75	16
## 53	7.91	153	40	3	112	129	Bad 39	18
## 54	6.92	109	64	13	39	119	Medium 61	17
## 55	4.90	134	103	13	25	144	Medium 76	17
## 56	6.85	143	81	5	60	154	Medium 61	18
## 57 11	91	133	82	0	54	84	Medium 50	17
## 58	0.91	93	91	0	22	117	Bad 75	11
## 59	5.42	103	93	15	188	103	Bad 74	16
## 60	5.21	118	71	4	148	114	Medium 80	13
## 61	8.32	122	102	19	469	123	Bad 29	13
## 62	7.32	105	32	0	358	107	Medium 26	13
## 63	1.82	139	45	0	146	133	Bad 77	17
## 64	8.47	119	88	10	170	101	Medium 61	13
## 65	7.80	100	67	12	184	104	Medium 32	16
## 66	4.90	122	26	0	197	128	Medium 55	13
## 67	8.85	127	92	0	508	91	Medium 56	18

## 68	9.01	126	61	14	152	115	Medium 47	16
## 69 13	.39	149	69	20	366	134	Good 60	13
## 70	7.99	127	59	0	339	99	Medium 65	12
## 71	9.46	89	81	15	237	99	Good 74	12
## 72	6.50	148	51	16	148	150	Medium 58	17
## 73	5.52	115	45	0	432	116	Medium 25	15
## 74 12	.61	118	90	10	54	104	Good 31	11
## 75	6.20	150	68	5	125	136	Medium 64	13
## 76	8.55	88	111	23	480	92	Bad 36	16
## 77 10	.64	102	87	10	346	70	Medium 64	15
## 78	7.70	118	71	12	44	89	Medium 67	18
## 79	4.43	134	48	1	139	145	Medium 65	12
## 80	9.14	134	67	0	286	90	Bad 41	13
## 81	8.01	113	100	16	353	79	Bad 68	11
## 82	7.52	116	72	0	237	128	Good 70	13
## 83 11	.62	151	83	4	325	139	Good 28	17
## 84	4.42	109	36	7	468	94	Bad 56	11
## 85	2.23	111	25	0	52	121	Bad 43	18
## 86	8.47	125	103	0	304	112	Medium 49	13
## 87	8.70	150	84	9	432	134	Medium 64	15
## 88 11	.70	131	67	7	272	126	Good 54	16
## 89	6.56	117	42	7	144	111	Medium 62	10
## 90	7.95	128	66	3	493	119	Medium 45	16
## 91	5.33	115	22	0	491	103	Medium 64	11
## 92	4.81	97	46	11	267	107	Medium 80	15
## 93	4.53	114	113	0	97	125	Medium 29	12
## 94	8.86	145	30	0	67	104	Medium 55	17
## 95	8.39	115	97	5	134	84	Bad 55	11
## 96	5.58	134	25	10	237	148	Medium 59	13
## 97	9.48	147	42	10	407	132	Good 73	16

## 98 7.4	5 161	82	5	287	129	Bad 33	16
## 99 12.49	122	77	24	382	127	Good 36	16
## 100 4.88	121	47	3	220	107	Bad 56	16
## 101 4.11	113	69	11	94	106	Medium 76	12
## 102 6.20	128	93	0	89	118	Medium 34	18
## 103 5.30	113	22	0	57	97	Medium 65	16
## 104 5.07	123	91	0	334	96	Bad 78	17
## 105 4.62	121	96	0	472	138	Medium 51	12
## 106 5.55	104	100	8	398	97	Medium 61	11
## 107 0.16	102	33	0	217	139	Medium 70	18
## 108 8.55	134	107	0	104	108	Medium 60	12
## 109 3.47	107	79	2	488	103	Bad 65	16
## 110 8.98	115	65	0	217	90	Medium 60	17
## 111 9.00	128	62	7	125	116	Medium 43	14
## 112 6.62	132	118	12	272	151	Medium 43	14
## 113 6.67	116	99	5	298	125	Good 62	12
## 114 6.01	131	29	11	335	127	Bad 33	12
## 115 9.31	122	87	9	17	106	Medium 65	13
## 116 8.54	139	35	0	95	129	Medium 42	13
## 117 5.08	135	75	0	202	128	Medium 80	10
## 118 8.80	145	53	0	507	119	Medium 41	12
## 119 7.57	112	88	2	243	99	Medium 62	11
## 120 7.37	130	94	8	137	128	Medium 64	12
## 121 6.87	128	105	11	249	131	Medium 63	13
## 122 11.67	125	89	10	380	87	Bad 28	10
## 123 6.88	119	100	5	45	108	Medium 75	10
## 124 8.19	127	103	0	125	155	Good 29	15
## 125 8.87	131	113	0	181	120	Good 63	14
## 126 9.34	89	78	0	181	49	Medium 43	15
## 127 11.27	153	68	2	60	133	Good 59	16

## 128 6.52	125	48	3	192	116	Medium 51	14
## 129 4.96	133	100	3	350	126	Bad 55	13
## 130 4.47	143	120	7	279	147	Bad 40	10
## 131 8.41	94	84	13	497	77	Medium 51	12
## 132 6.50	108	69	3	208	94	Medium 77	16
## 133 9.54	125	87	9	232	136	Good 72	10
## 134 7.62	132	98	2	265	97	Bad 62	12
## 135 3.67	132	31	0	327	131	Medium 76	16
## 136 6.44	96	94	14	384	120	Medium 36	18
## 137 5.17	131	75	0	10	120	Bad 31	18
## 138 6.52	128	42	0	436	118	Medium 80	11
## 139 10.27	125	103	12	371	109	Medium 44	10
## 140 12.30	146	62	10	310	94	Medium 30	13
## 141 6.03	133	60	10	277	129	Medium 45	18
## 142 6.53	140	42	0	331	131	Bad 28	15
## 143 7.44	124	84	0	300	104	Medium 77	15
## 144 0.53	122	88	7	36	159	Bad 28	17
## 145 9.09	132	68	0	264	123	Good 34	11
## 146 8.77	144	63	11	27	117	Medium 47	17
## 147 3.90	114	83	0	412	131	Bad 39	14
## 148 10.51	140	54	9	402	119	Good 41	16
## 149 7.56	110	119	0	384	97	Medium 72	14
## 150 11.48	121	120	13	140	87	Medium 56	11
## 151 10.49	122	84	8	176	114	Good 57	10
## 152 10.77	111	58	17	407	103	Good 75	17
## 153 7.64	128	78	0	341	128	Good 45	13
## 154 5.93	150	36	7	488	150	Medium 25	17
## 155 6.89	129	69	10	289	110	Medium 50	16
## 156 7.71	98	72	0	59	69	Medium 65	16
## 157 7.49	146	34	0	220	157	Good 51	16

## 158 10.21	121	58	8	249	90	Medium 48	13
## 159 12.53	142	90	1	189	112	Good 39	10
## 160 9.32	119	60	0	372	70	Bad 30	18
## 161 4.67	111	28	0	486	111	Medium 29	12
## 162 2.93	143	21	5	81	160	Medium 67	12
## 163 3.63	122	74	0	424	149	Medium 51	13
## 164 5.68	130	64	0	40	106	Bad 39	17
## 165 8.22	148	64	0	58	141	Medium 27	13
## 166 0.37	147	58	7	100	191	Bad 27	15
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## 167 6.71	119	67	17	151	137	Medium 55	11
## 168 6.71	106	73	0	216	93	Medium 60	13
## 169 7.30	129	89	0	425	117	Medium 45	10
## 170 11.48	104	41	15	492	77	Good 73	18
## 171 8.01	128	39	12	356	118	Medium 71	10
## 172 12.49	93	106	12	416	55	Medium 75	15
## 173 9.03	104	102	13	123	110	Good 35	16
## 174 6.38	135	91	5	207	128	Medium 66	18
## 175 0.00	139	24	0	358	185	Medium 79	15
## 176 7.54	115	89	0	38	122	Medium 25	12
## 177 5.61	138	107	9	480	154	Medium 47	11
## 178 10.48	138	72	0	148	94	Medium 27	17
## 179 10.66	104	71	14	89	81	Medium 25	14
## 180 7.78	144	25	3	70	116	Medium 77	18
## 181 4.94	137	112	15	434	149	Bad 66	13
## 182 7.43	121	83	0	79	91	Medium 68	11
## 183 4.74	137	60	4	230	140	Bad 25	13
## 184 5.32	118	74	6	426	102	Medium 80	18
## 185 9.95	132	33	7	35	97	Medium 60	11
## 186 10.07	130	100	11	449	107	Medium 64	10
## 187 8.68	120	51	0	93	86	Medium 46	17

## 188 6.03	117	32	0	142	96	Bad 62	17
## 189 8.07	116	37	0	426	90	Medium 76	15
## 190 12.11	118	117	18	509	104	Medium 26	15
## 191 8.79	130	37	13	297	101	Medium 37	13
## 192 6.67	156	42	13	170	173	Good 74	14
## 193 7.56	108	26	0	408	93	Medium 56	14
## 194 13.28	139	70	7	71	96	Good 61	10
## 195 7.23	112	98	18	481	128	Medium 45	11
## 196 4.19	117	93	4	420	112	Bad 66	11
## 197 4.10	130	28	6	410	133	Bad 72	16
## 198 2.52	124	61	0	333	138	Medium 76	16
## 199 3.62	112	80	5	500	128	Medium 69	10
## 200 6.42	122	88	5	335	126	Medium 64	14
## 201 5.56	144	92	0	349	146	Medium 62	12
## 202 5.94	138	83	0	139	134	Medium 54	18
## 203 4.10	121	78	4	413	130	Bad 46	10
## 204 2.05	131	82	0	132	157	Bad 25	14
## 205 8.74	155	80	0	237	124	Medium 37	14
## 206 5.68	113	22	1	317	132	Medium 28	12
## 207 4.97	162	67	0	27	160	Medium 77	17
## 208 8.19	111	105	0	466	97	Bad 61	10
## 209 7.78	86	54	0	497	64	Bad 33	12
## 210 3.02	98	21	11	326	90	Bad 76	11
## 211 4.36	125	41	2	357	123	Bad 47	14
## 212 9.39	117	118	14	445	120	Medium 32	15
## 213 12.04	145	69	19	501	105	Medium 45	11
## 214 8.23	149	84	5	220	139	Medium 33	10
## 215 4.83	115	115	3	48	107	Medium 73	18
## 216 2.34	116	83	15	170	144	Bad 71	11
## 217 5.73	141	33	0	243	144	Medium 34	17

## 218 4.34	106	44	0	481	111	Medium 70	14
## 219 9.70	138	61	12	156	120	Medium 25	14
## 220 10.62	116	79	19	359	116	Good 58	17
## 221 10.59	131	120	15	262	124	Medium 30	10
## 222 6.43	124	44	0	125	107	Medium 80	11
## 223 7.49	136	119	6	178	145	Medium 35	13
## 224 3.45	110	45	9	276	125	Medium 62	14
## 225 4.10	134	82	0	464	141	Medium 48	13
## 226 6.68	107	25	0	412	82	Bad 36	14
## 227 7.80	119	33	0	245	122	Good 56	14
## 228 8.69	113	64	10	68	101	Medium 57	16
## 229 5.40	149	73	13	381	163	Bad 26	11
## 230 11.19	98	104	0	404	72	Medium 27	18
## 231 5.16	115	60	0	119	114	Bad 38	14
## 232 8.09	132	69	0	123	122	Medium 27	11
## 233 13.14	137	80	10	24	105	Good 61	15
## 234 8.65	123	76	18	218	120	Medium 29	14
## 235 9.43	115	62	11	289	129	Good 56	16
## 236 5.53	126	32	8	95	132	Medium 50	17
## 237 9.32	141	34	16	361	108	Medium 69	10
## 238 9.62	151	28	8	499	135	Medium 48	10
## 239 7.36	121	24	0	200	133	Good 73	13
## 240 3.89	123	105	0	149	118	Bad 62	16
## 241 10.31	159	80	0	362	121	Medium 26	18
## 242 12.01	136	63	0	160	94	Medium 38	12
## 243 4.68	124	46	0	199	135	Medium 52	14
## 244 7.82	124	25	13	87	110	Medium 57	10
## 245 8.78	130	30	0	391	100	Medium 26	18
## 246 10.00	114	43	0	199	88	Good 57	10
## 247 6.90	120	56	20	266	90	Bad 78	18

## 248 5.04	123	114	0	298	151	Bad 34	16
## 249 5.36	111	52	0	12	101	Medium 61	11
## 250 5.05	125	67	0	86	117	Bad 65	11
## 251 9.16	137	105	10	435	156	Good 72	14
## 252 3.72	139	111	5	310	132	Bad 62	13
## 253 8.31	133	97	0	70	117	Medium 32	16
## 254 5.64	124	24	5	288	122	Medium 57	12
## 255 9.58	108	104	23	353	129	Good 37	17
## 256 7.71	123	81	8	198	81	Bad 80	15
## 257 4.20	147	40	0	277	144	Medium 73	10
## 258 8.67	125	62	14	477	112	Medium 80	13
## 259 3.47	108	38	0	251	81	Bad 72	14
## 260 5.12	123	36	10	467	100	Bad 74	11
## 261 7.67	129	117	8	400	101	Bad 36	10
## 262 5.71	121	42	4	188	118	Medium 54	15
## 263 6.37	120	77	15	86	132	Medium 48	18
## 264 7.77	116	26	6	434	115	Medium 25	17
## 265 6.95	128	29	5	324	159	Good 31	15
## 266 5.31	130	35	10	402	129	Bad 39	17
## 267 9.10	128	93	12	343	112	Good 73	17
## 268 5.83	134	82	7	473	112	Bad 51	12
## 269 6.53	123	57	0	66	105	Medium 39	11
## 270 5.01	159	69	0	438	166	Medium 46	17
## 271 11.99	119	26	0	284	89	Good 26	10
## 272 4.55	111	56	0	504	110	Medium 62	16
## 273 12.98	113	33	0	14	63	Good 38	12
## 274 10.04	116	106	8	244	86	Medium 58	12
## 275 7.22	135	93	2	67	119	Medium 34	11
## 276 6.67	107	119	11	210	132	Medium 53	11
## 277 6.93	135	69	14	296	130	Medium 73	15

## 278 7.80	136	48	12	326	125	Medium 36	16
## 279 7.22	114	113	2	129	151	Good 40	15
## 280 3.42	141	57	13	376	158	Medium 64	18
## 281 2.86	121	86	10	496	145	Bad 51	10
## 282 11.19	122	69	7	303	105	Good 45	16
## 283 7.74	150	96	0	80	154	Good 61	11
## 284 5.36	135	110	0	112	117	Medium 80	16
## 285 6.97	106	46	11	414	96	Bad 79	17
## 286 7.60	146	26	11	261	131	Medium 39	10
## 287 7.53	117	118	11	429	113	Medium 67	18
## 288 6.88	95	44	4	208	72	Bad 44	17
## 289 6.98	116	40	0	74	97	Medium 76	15
## 290 8.75	143	77	25	448	156	Medium 43	17
## 291 9.49	107	111	14	400	103	Medium 41	11
## 292 6.64	118	70	0	106	89	Bad 39	17
## 293 11.82	113	66	16	322	74	Good 76	15
## 294 11.28	123	84	0	74	89	Good 59	10
## 295 12.66	148	76	3	126	99	Good 60	11
## 296 4.21	118	35	14	502	137	Medium 79	10
## 297 8.21	127	44	13	160	123	Good 63	18
## 298 3.07	118	83	13	276	104	Bad 75	10
## 299 10.98	148	63	0	312	130	Good 63	15
## 300 9.40	135	40	17	497	96	Medium 54	17
## 301 8.57	116	78	1	158	99	Medium 45	11
## 302 7.41	99	93	0	198	87	Medium 57	16
## 303 5.28	108	77	13	388	110	Bad 74	14
## 304 10.01	133	52	16	290	99	Medium 43	11
## 305 11.93	123	98	12	408	134	Good 29	10
## 306 8.03	115	29	26	394	132	Medium 33	13
## 307 4.78	131	32	1	85	133	Medium 48	12

## 308 5.90	138	92	0	13	120	Bad 61	12
## 309 9.24	126	80	19	436	126	Medium 52	10
## 310 11.18	131	111	13	33	80	Bad 68	18
## 311 9.53	175	65	29	419	166	Medium 53	12
## 312 6.15	146	68	12	328	132	Bad 51	14
## 313 6.80	137	117	5	337	135	Bad 38	10
## 314 9.33	103	81	3	491	54	Medium 66	13
## 315 7.72	133	33	10	333	129	Good 71	14
## 316 6.39	131	21	8	220	171	Good 29	14
## 317 15.63	122	36	5	369	72	Good 35	10
## 318 6.41	142	30	0	472	136	Good 80	15
## 319 10.08	116	72	10	456	130	Good 41	14
## 320 6.97	127	45	19	459	129	Medium 57	11
## 321 5.86	136	70	12	171	152	Medium 44	18
## 322 7.52	123	39	5	499	98	Medium 34	15
## 323 9.16	140	50	10	300	139	Good 60	15
## 324 10.36	107	105	18	428	103	Medium 34	12
## 325 2.66	136	65	4	133	150	Bad 53	13
## 326 11.70	144	69	11	131	104	Medium 47	11
## 327 4.69	133	30	0	152	122	Medium 53	17
## 328 6.23	112	38	17	316	104	Medium 80	16
## 329 3.15	117	66	1	65	111	Bad 55	11
## 330 11.27	100	54	9	433	89	Good 45	12
## 331 4.99	122	59	0	501	112	Bad 32	14
## 332 10.10	135	63	15	213	134	Medium 32	10
## 333 5.74	106	33	20	354	104	Medium 61	12
## 334 5.87	136	60	7	303	147	Medium 41	10
## 335 7.63	93	117	9	489	83	Bad 42	13
## 336 6.18	120	70	15	464	110	Medium 72	15
## 337 5.17	138	35	6	60	143	Bad 28	18

## 338 8.61	130	38	0	283	102	Medium 80	15
## 339 5.97	112	24	0	164	101	Medium 45	11
## 340 11.54	134	44	4	219	126	Good 44	15
## 341 7.50	140	29	0	105	91	Bad 43	16
## 342 7.38	98	120	0	268	93	Medium 72	10
## 343 7.81	137	102	13	422	118	Medium 71	10
## 344 5.99	117	42	10	371	121	Bad 26	14
## 345 8.43	138	80	0	108	126	Good 70	13
## 346 4.81	121	68	0	279	149	Good 79	12
## 347 8.97	132	107	0	144	125	Medium 33	13
## 348 6.88	96	39	0	161	112	Good 27	14
## 349 12.57	132	102	20	459	107	Good 49	11
## 350 9.32	134	27	18	467	96	Medium 49	14
## 351 8.64	111	101	17	266	91	Medium 63	17
## 352 10.44	124	115	16	458	105	Medium 62	16
## 353 13.44	133	103	14	288	122	Good 61	17
## 354 9.45	107	67	12	430	92	Medium 35	12
## 355 5.30	133	31	1	80	145	Medium 42	18
## 356 7.02	130	100	0	306	146	Good 42	11
## 357 3.58	142	109	0	111	164	Good 72	12
## 358 13.36	103	73	3	276	72	Medium 34	15
## 359 4.17	123	96	10	71	118	Bad 69	11
## 360 3.13	130	62	11	396	130	Bad 66	14
## 361 8.77	118	86	7	265	114	Good 52	15
## 362 8.68	131	25	10	183	104	Medium 56	15
## 363 5.25	131	55	0	26	110	Bad 79	12
## 364 10.26	111	75	1	377	108	Good 25	12
## 365 10.50	122	21	16	488	131	Good 30	14
## 366 6.53	154	30	0	122	162	Medium 57	17
## 367 5.98	124	56	11	447	134	Medium 53	12

## 368 14.37	95	106	0	256	53	Good 52	17
## 369 10.71	109	22	10	348	79	Good 74	14
## 370 10.26	135	100	22	463	122	Medium 36	14
## 371 7.68	126	41	22	403	119	Bad 42	12
## 372 9.08	152	81	0	191	126	Medium 54	16
## 373 7.80	121	50	0	508	98	Medium 65	11
## 374 5.58	137	71	0	402	116	Medium 78	17
## 375 9.44	131	47	7	90	118	Medium 47	12
## 376 7.90	132	46	4	206	124	Medium 73	11
## 377 16.27	141	60	19	319	92	Good 44	11
## 378 6.81	132	61	0	263	125	Medium 41	12
## 379 6.11	133	88	3	105	119	Medium 79	12
	125	111	0	404	107	Bad 54	15
## 380 5.81	125	111	U	404	107	Bau 54	15
## 381 9.64	106	64	10	17	89	Medium 68	17
## 382 3.90	124	65	21	496	151	Bad 77	13
## 383 4.95	121	28	19	315	121	Medium 66	14
## 384 9.35	98	117	0	76	68	Medium 63	10
## 385 12.85	123	37	15	348	112	Good 28	12
## 386 5.87	131	73	13	455	132	Medium 62	17
## 387 5.32	152	116	0	170	160	Medium 39	16
## 388 8.67	142	73	14	238	115	Medium 73	14
## 389 8.14	135	89	11	245	78	Bad 79	16
## 390 8.44	128	42	8	328	107	Medium 35	12
## 391 5.47	108	75	9	61	111	Medium 67	12
## 392 6.10	153	63	0	49	124	Bad 56	16
## 393 4.53	129	42	13	315	130	Bad 34	13
## 394 5.57	109	51	10	26	120	Medium 30	17
## 395 5.35	130	58	19	366	139	Bad 33	16
## 396 12.57	138	108	17	203	128	Good 33	14
## 397 6.14	139	23	3	37	120	Medium 55	11
## 398 7.41	162	26	12	368	159	Medium 40	18
## 399 5.94	100	79	7	284	95	Bad 50	12
## 400 9.71	134	37	0	27	120	Good 49	16
## Urban US							
## 1 Yes Yes							

15

2

- ## 3 Yes Yes
- ## 4 Yes Yes
- ## 5 Yes No
- ## 6 No Yes
- ## 7 Yes No
- ## 8 Yes Yes
- ## 9 No No
- ## 10 No Yes
- ## 11 No Yes
- ## 12 Yes Yes
- ## 13 Yes No
- ## 14 Yes Yes
- ## 15 Yes Yes
- ## 16 No No
- ## 17 Yes No
- ## 18 Yes Yes
- ## 19 No Yes
- ## 20 Yes Yes
- ## 21 Yes Yes
- ## 22 No Yes
- ## 23 Yes No
- ## 24 Yes No
- ## 25 Yes Yes
- ## 26 No No
- ## 27 No Yes
- ## 28 Yes No
- ## 29 Yes Yes
- ## 30 Yes Yes

# 31	Yes No	
# 31	Yes No	

32 Yes Yes

33 No Yes

34 Yes Yes

35 Yes Yes

## 36	No Yes
## 37	No No
## 38	Yes Yes
## 39	Yes No
## 40	No No
## 41	No No
## 42	Yes No
## 43	Yes No
## 44	Yes Yes
## 45	Yes Yes
## 46	Yes Yes
## 47	No Yes
## 48	Yes No
## 49	Yes No
## 50	Yes No
## 51	Yes Yes
## 52	Yes No
## 53	Yes Yes
## 54	Yes Yes
## 55	No Yes
## 56	Yes Yes
## 57	Yes No
## 58	Yes No
## 59	Yes Yes
## 60	Yes No
## 61	Yes Yes
## 62	No No
## 63	Yes Yes
## 64	Yes Yes
## 65	No Yes
## 66	No No
## 67	Yes No
## 68	Yes Yes
## 69	Yes Yes
## 70	Yes No
## 71	Yes Yes
## 72	No Yes
## 73	Yes No
## 74	No Yes
## 75	No Yes
## 76	No Yes
## 77	Yes Yes
## 78	No Yes
## 79	Yes Yes
_	Yes No
## 80	
## 81	Yes Yes

## 82 ## 83 ## 84 ## 85 ## 86 ## 87 ## 88 ## 89	Yes No Yes Yes Yes Yes No No No No Yes No No Yes
## 90 ## 91 ## 92 ## 93 ## 94 ## 95 ## 96 ## 97 ## 98 ## 100 ## 101 ## 102 ## 103 ## 104	No No No No No No Yes Yes Yes No Yes Yes Yes Yes No Yes No Yes No Yes No Yes No Yes Yes No No No Yes Yes
## 105 ## 106 ## 107 ## 108 ## 109 ## 110 ## 111 ## 112 ## 113 ## 114 ## 115 ## 116 ## 117 ## 118 ## 119 ## 120	Yes No Yes Yes No No Yes No No No Yes Yes Yes Yes Yes Yes Yes Yes Yes No No No Yes No Yes No Yes No Yes Yes Yes Yes
## 120 ## 121 ## 122 ## 123 ## 124 ## 125 ## 126 ## 127 ## 128 ## 129	Yes Yes Yes Yes Yes Yes No Yes Yes No No No Yes Yes Yes Yes Yes Yes

## 130 ## 131 ## 132 ## 133 ## 134 ## 135 ## 136 ## 137 ## 138 ## 140 ## 141 ## 142 ## 143	No Yes Yes Yes Yes No Yes Yes Yes No No Yes No No Yes No Yes Yes No Yes Yes Yes Yes Yes Yes Yes Yes No Yes Yes
## 144	
## 145 ## 146 ## 147 ## 148 ## 149 ## 150 ## 151 ## 152 ## 153 ## 154 ## 155 ## 156 ## 160 ## 161 ## 162 ## 163 ## 164 ## 165 ## 166 ## 167 ## 168 ## 170 ## 171 ## 172 ## 173 ## 174	No No Yes Yes Yes No No Yes No Yes No Yes No Yes No No No Yes No Yes No Yes No Yes No No No Yes No No No Yes No No No Yes Yes No No No No Yes Yes No No No No Yes Yes No No Yes
## 175	No No Yes Yes

## 176	Yes No
## 177	No Yes
## 178	Yes Yes
## 179	No Yes
## 180	Yes Yes
## 181	Yes Yes
## 182	Yes No
## 183	Yes No
## 184	Yes Yes
## 185	No Yes
## 186	Yes Yes
## 187	No No
## 188	Yes No
## 189	Yes No
## 190	No Yes
## 191	No Yes
## 192	Yes Yes
## 193	No No
## 194	Yes Yes
## 195	Yes Yes
## 196	Yes Yes
## 197	

## 198	Yes No
## 199	Yes Yes
## 200	Yes Yes
## 201	No No
## 202	Yes No
## 203	No Yes
## 204	Yes No
## 205	Yes No
## 206	Yes No
## 207	Yes Yes
## 208	No No
## 209	Yes No
## 210	No Yes
## 210	
	No Yes
## 212	Yes Yes
## 213	Yes Yes
## 214	Yes Yes
## 215	Yes Yes
## 216	Yes Yes
## 217	Yes No
## 218	No No
## 219	Yes Yes
## 220	Yes Yes
## 221	Yes Yes
## 222	Yes No
## 223	Yes Yes
## 224	Yes Yes
## 225	No No
## 226	Yes No
## 227	Yes No
## 228	Yes Yes
## 229	No Yes
## 230	No No
## 231	No No
## 232	No No
## 233	Yes Yes
## 234	No Yes
## 235	No Yes
## 236	Yes Yes
## 237	Yes Yes
## 238	Yes Yes
## 239	Yes No
## 240	Yes Yes
## 241	Yes No
## 242	Yes No
## 243	No No

## 244 ## 245 ## 246 ## 247 ## 248 ## 249 ## 250 ## 251	Yes Yes Yes No No Yes Yes Yes Yes No Yes Yes Yes No
## 252	
## 253 ## 254 ## 255 ## 256 ## 257 ## 258 ## 260 ## 261 ## 262 ## 263 ## 264 ## 265 ## 266 ## 267 ## 268 ## 270 ## 271 ## 272 ## 273 ## 274 ## 275 ## 278 ## 277 ## 278 ## 279 ## 280 ## 281 ## 282 ## 283 ## 284 ## 285 ## 286	Yes No No Yes Yes Yes Yes Yes Yes No No No No Yes No Yes
## 287 ## 288 ## 289	No Yes Yes Yes No No Yes Yes

## 290 ## 291 ## 292 ## 293 ## 294 ## 295 ## 296 ## 297 ## 298 ## 300 ## 301 ## 302 ## 303 ## 304	Yes Yes No Yes Yes No Yes Yes Yes No Yes
## 305	
## 200	
## 306	
## 307	Yes Yes
## 308 ## 309	Yes No Yes Yes
## 309	Yes Yes
## 310	Yes Yes
## 312	Yes Yes
## 313	Yes Yes
## 314	Yes No
## 315	Yes Yes
## 316	Yes Yes
## 317	Yes Yes
## 318	No No
## 319	No Yes
## 320	No Yes
## 321	Yes Yes
## 322	Yes No
## 323	Yes Yes
## 324	Yes Yes
## 325	Yes Yes
## 326	Yes Yes
## 327	Yes No
## 328	Yes Yes
## 329	Yes Yes
## 330	Yes Yes
## 331	No No
## 332	Yes Yes
## 333	Yes Yes
## 334 ## 335	Yes Yes
## 335	Yes Yes
	Yes Yes

Vac	Vac
162	163

## 336	Yes Yes
## 337	Yes No
## 338	Yes No
## 339	Yes No
## 340	Yes Yes
## 341	Yes No
## 342	No No
## 343	No Yes
## 344	Yes Yes
## 345	No Yes
## 346	Yes No
## 347	No No
## 348	No No
## 349	Yes Yes
## 350	No Yes
## 351	No Yes
## 352	No Yes
## 353	Yes Yes
## 354	No Yes
## 355	Yes Yes
## 356	Yes No
## 357	Yes No
## 358	Yes Yes
## 359	

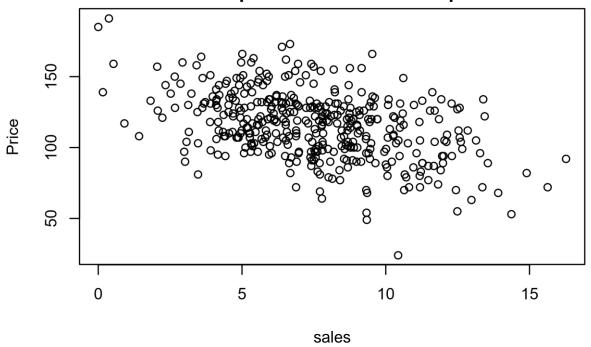
```
## 360
## 361
            No Yes
## 362
            No Yes
## 363
          Yes Yes
## 364
          Yes No
## 365
          Yes Yes
## 366
            No No
## 367
            No Yes
## 368
          Yes No
## 369
            No Yes
## 370
          Yes Yes
## 371
          Yes Yes
## 372
          Yes No
## 373
            No No
## 374
          Yes No
## 375
          Yes Yes
## 376
          Yes No
## 377
          Yes Yes
## 378
            No No
## 379
          Yes Yes
## 380
          Yes No
## 381
          Yes Yes
## 382
          Yes Yes
## 383
          Yes Yes
## 384
          Yes No
## 385
          Yes Yes
## 386
          Yes Yes
## 387
          Yes No
            No Yes
## 388
## 389
          Yes Yes
## 390
          Yes Yes
## 391
          Yes Yes
## 392
          Yes No
## 393
          Yes Yes
## 394
            No Yes
## 395
          Yes Yes
## 396
          Yes Yes
## 397
           No Yes
## 398
          Yes Yes
## 399
          Yes Yes
## 400
          Yes Yes
##IQR of Price attribute
```

IQR(Carseats\$Price)

[1] 31

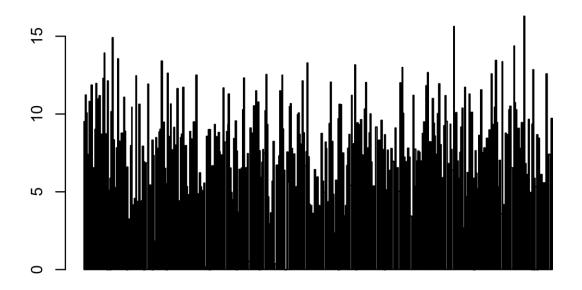
plot(Carseats\$Sales,Carseats\$Price,main = "scatter plot between sales and price",xlab = "sales",ylab =

scatter plot between sales and price



##barplot between sales and price

barplot(Carseats\$Sales,Carseats\$Price)

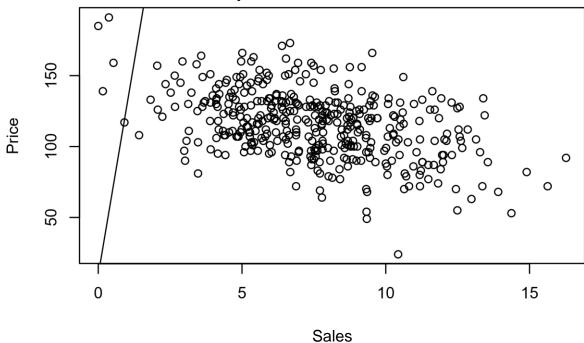


scatter plot between sales and prices by using abline

plot(Carseats\$Sales, Carseats\$Price, main = "Scatterplot between Price and Sales", xlab =

"Sales", ylab

Scatterplot between Price and Sales



##correlation between sales and price

cor(Carseats\$Sales,Carseats\$Price)

[1] -0.4449507

##maximum value of advertising attribute

max(Carseats\$Advertising)

[1] 29