

Assignment 1

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2022-09-26

##calling a ISLR library and print carsets dataset

```
library(ISLR)
data<- Carseats
print(Carseats)
```

| ## | Sales | CompPrice | Income | Advertising | Population | Price | ShelveLoc | Age | Education |
|-------|-------|-----------|--------|-------------|------------|-------|-----------|-----|-----------|
| ## 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 |
| ## 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 | 11.96 | 117 | 94 | 4 | 503 | 94 | Good | 50 | 13 |
| ## 13 | 3.98 | 122 | 35 | 2 | 393 | 136 | Medium | 62 | 18 |
| ## 14 | 10.96 | 115 | 28 | 11 | 29 | 86 | Good | 53 | 18 |
| ## 15 | 11.17 | 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 | 12.29 | 147 | 74 | 13 | 251 | 131 | Good | 52 | 10 |
| ## 19 | 13.91 | 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 | 12.13 | 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 | 10.14 | 145 | 119 | 16 | 294 | 113 | Bad | 42 | 12 |
| ## 26 | 14.90 | 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 | 13.55 | 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 |

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|-------|-------|-----|-----|----|-----|-----|--------|----|----|
| ## 34 | 8.77 | 114 | 38 | 13 | 317 | 128 | Good | 50 | 16 |
| ## 35 | 2.67 | 115 | 54 | 0 | 406 | 128 | Medium | 42 | 17 |
| ## 36 | 11.07 | 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 |

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|--------|-------|-----|-----|----|-----|-----|--------|----|----|
| ## 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 | 7.45 | 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 |

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|--------|-------|-----|-----|----|-----|-----|--------|----|----|
| ## 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 |
| ## 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 |

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|--------|-------|-----|-----|----|-----|-----|--------|----|----|
| ## 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 |

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|--------|-------|-----|-----|----|-----|-----|--------|----|----|
| ## 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 |

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|--------|-------|-----|-----|----|-----|-----|--------|----|----|
| ## 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 |
| ## 380 | 5.81 | 125 | 111 | 0 | 404 | 107 | Bad | 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 | | | | | | | |
| ## 2 | Yes | Yes | | | | | | | |
| ## 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 |
| ## 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 |
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| ## 84 | Yes | Yes |
| ## 85 | No | No |
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| ## 87 | Yes | No |
| ## 88 | No | Yes |
| ## 89 | Yes | Yes |
| ## 90 | No | No |
| ## 91 | No | No |
| ## 92 | Yes | Yes |
| ## 93 | Yes | No |
| ## 94 | Yes | No |
| ## 95 | Yes | Yes |
| ## 96 | Yes | Yes |
| ## 97 | No | Yes |
| ## 98 | Yes | Yes |
| ## 99 | No | Yes |
| ## 100 | No | Yes |
| ## 101 | No | Yes |
| ## 102 | Yes | No |
| ## 103 | No | No |
| ## 104 | Yes | Yes |
| ## 105 | Yes | No |
| ## 106 | Yes | Yes |
| ## 107 | No | No |
| ## 108 | Yes | No |
| ## 109 | Yes | No |
| ## 110 | No | No |
| ## 111 | Yes | Yes |
| ## 112 | Yes | Yes |
| ## 113 | Yes | Yes |
| ## 114 | Yes | Yes |
| ## 115 | Yes | Yes |
| ## 116 | Yes | No |
| ## 117 | No | No |
| ## 118 | Yes | No |

| | | |
|--------|-----|-----|
| ## 119 | Yes | Yes |
| ## 120 | Yes | Yes |
| ## 121 | Yes | Yes |
| ## 122 | Yes | Yes |
| ## 123 | Yes | Yes |
| ## 124 | No | Yes |
| ## 125 | Yes | No |
| ## 126 | No | No |
| ## 127 | Yes | Yes |
| ## 128 | Yes | Yes |
| ## 129 | Yes | Yes |
| ## 130 | No | Yes |
| ## 131 | Yes | Yes |
| ## 132 | Yes | No |
| ## 133 | Yes | Yes |
| ## 134 | Yes | Yes |
| ## 135 | Yes | No |
| ## 136 | No | Yes |
| ## 137 | No | No |
| ## 138 | Yes | No |
| ## 139 | Yes | Yes |
| ## 140 | No | Yes |
| ## 141 | Yes | Yes |
| ## 142 | Yes | No |
| ## 143 | Yes | No |
| ## 144 | Yes | Yes |
| ## 145 | No | No |
| ## 146 | Yes | Yes |
| ## 147 | Yes | No |
| ## 148 | No | Yes |
| ## 149 | No | Yes |
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| ## 162 | No | Yes |
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| ## 164 | No | No |
| ## 165 | No | Yes |
| ## 166 | Yes | Yes |
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| ## 169 | Yes | No |
| ## 170 | Yes | Yes |
| ## 171 | Yes | Yes |
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| | | |
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| ## 173 | Yes | Yes |
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| ## 175 | No | No |
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| ## 180 | Yes | Yes |
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| ## 192 | Yes | Yes |
| ## 193 | No | No |
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| ## 198 | Yes | No |
| ## 199 | Yes | Yes |
| ## 200 | Yes | Yes |
| ## 201 | No | No |
| ## 202 | Yes | No |
| ## 203 | No | Yes |
| ## 204 | Yes | No |
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| ## 208 | No | No |
| ## 209 | Yes | No |
| ## 210 | No | Yes |
| ## 211 | 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 |

| | | |
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| ## 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 |
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| ## 239 | Yes | No |
| ## 240 | Yes | Yes |
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| ## 247 | Yes | Yes |
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| ## 250 | Yes | No |
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| ## 252 | Yes | Yes |
| ## 253 | Yes | No |
| ## 254 | No | Yes |
| ## 255 | Yes | Yes |
| ## 256 | Yes | Yes |
| ## 257 | Yes | No |
| ## 258 | Yes | Yes |
| ## 259 | No | No |
| ## 260 | No | Yes |
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| ## 262 | Yes | Yes |
| ## 263 | Yes | Yes |
| ## 264 | Yes | Yes |
| ## 265 | Yes | Yes |
| ## 266 | Yes | Yes |
| ## 267 | No | Yes |
| ## 268 | No | Yes |
| ## 269 | Yes | No |
| ## 270 | Yes | No |
| ## 271 | Yes | No |
| ## 272 | Yes | No |
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| ## 276 | Yes | Yes |
| ## 277 | Yes | Yes |
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| ## 279 | No | Yes |
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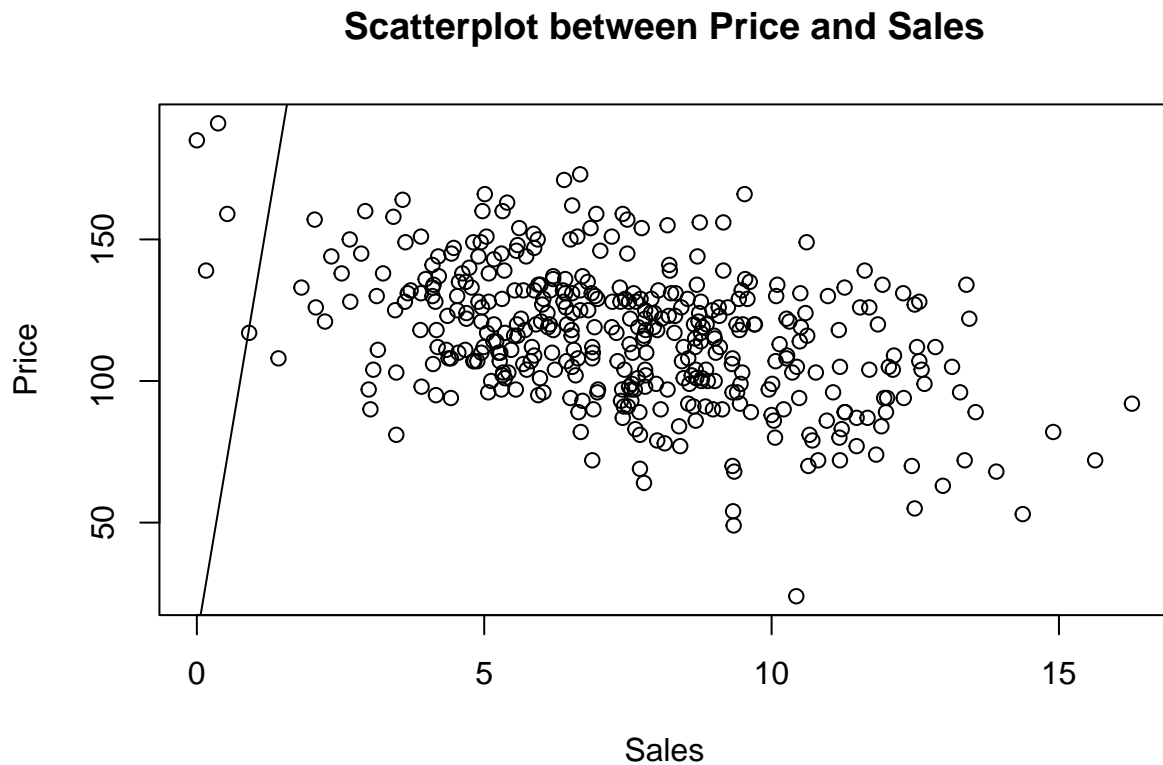
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| ## | 282 | No | Yes |
| ## | 283 | Yes | No |
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| ## | 287 | No | Yes |
| ## | 288 | Yes | Yes |
| ## | 289 | No | No |
| ## | 290 | Yes | Yes |
| ## | 291 | No | Yes |
| ## | 292 | Yes | No |
| ## | 293 | Yes | Yes |
| ## | 294 | Yes | No |
| ## | 295 | Yes | Yes |
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| ## | 297 | Yes | Yes |
| ## | 298 | Yes | Yes |
| ## | 299 | Yes | No |
| ## | 300 | No | Yes |
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| ## | 304 | Yes | Yes |
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| ## | 323 | Yes | Yes |
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| ## | 332 | Yes | Yes |
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| | | |
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| ## 336 | Yes | Yes |
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| ## 360 | Yes | Yes |
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| ## 363 | Yes | Yes |
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| ## 365 | Yes | Yes |
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| ## 368 | Yes | No |
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| ## 372 | Yes | No |
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| ## 380 | Yes | No |
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| ## 382 | Yes | Yes |
| ## 383 | Yes | Yes |
| ## 384 | Yes | No |
| ## 385 | Yes | Yes |
| ## 386 | Yes | Yes |
| ## 387 | Yes | No |
| ## 388 | No | Yes |

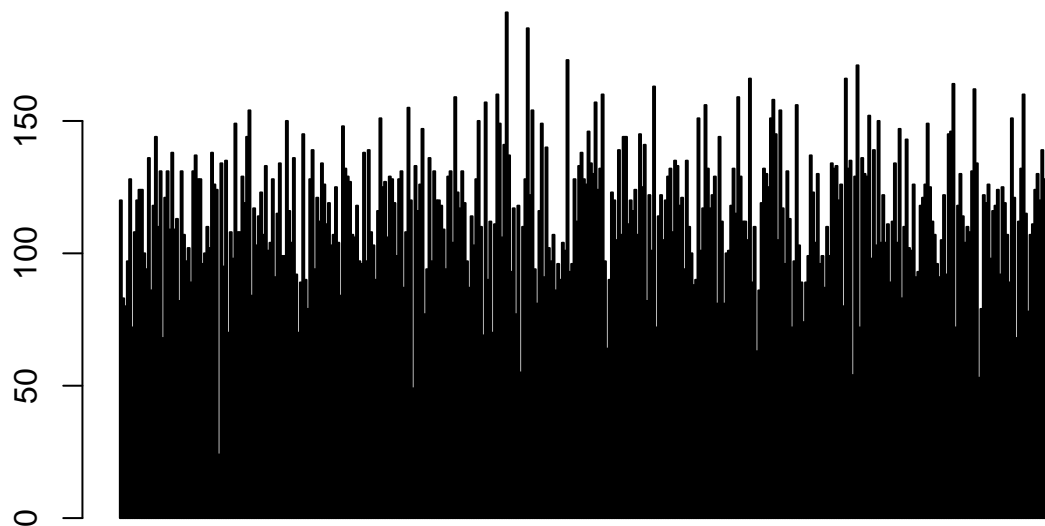
```
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## 390    Yes Yes
## 391    Yes Yes
## 392    Yes No
## 393    Yes Yes
## 394     No Yes
## 395    Yes Yes
## 396    Yes Yes
## 397     No Yes
## 398    Yes Yes
## 399    Yes Yes
## 400    Yes Yes
```

```
##scatter plot between sales and price
```

```
plot(Carseats$Sales, Carseats$Price, main = "Scatterplot between Price and Sales", xlab = "Sales", ylab = "Price")
```



```
barplot(Carseats$Price)
```

##correlation between sales and price

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

```
## [1] -0.4449507
```

##maximum value attribute of advertisement

```
max(Carseats$Advertising)
```

```
## [1] 29
```

##summary of carseats

```
summary(data)
```

```
##      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      ShelfLoc      Age      Education
```

```
## Min.      : 10.0    Min.      : 24.0    Bad      : 96    Min.      :25.00    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
##
##
##
##
```

#Interquartile range of price

```
IQR(Carseats$Price)
```

```
## [1] 31
```