MSCS 264: Homework #14

Paul Martinuzzi

1. Read in the table of data found at this link: https://en.wikipedia.org/wiki/List_of_United_States_ cities_by_population and create a scatterplot of land area versus the 2018 estimated population. Identify and label any outlier cities using `geom_label_repel()`. Additionally, do necessary tidying: get rid of extraneous information in the cells, parse columns into the proper format, etc. A few things to look for:

#tibble2 is tidy, I just labeled the columns in tibble1 that I was going to actually use later on. To skip output in this chunk go to page 29.

```
link <- read_html("https://en.wikipedia.org/wiki/List_of_United_States_cities_by_population")
tables <- html_nodes(link, css = "table")
html_table(tables, header = TRUE, fill = TRUE)
```

```
## [[1]]
##   Map all coordinates using: OpenStreetMap
## 1      Download coordinates as: KML · GPX
##
## [[2]]
##
## 1
## 2
## 3                                                                      Population\n\nAreaDens
## 4
## 5
## 6
## 7  569 Primary Statistical Areas176 Combined Statistical Areas938 Core Based Statistical Areas392 Met
## 8
## 9
## 10
##
## [[3]]
##   Map this section's coordinates using: OpenStreetMap
## 1              Download coordinates as: KML · GPX
##
## [[4]]
##                            State capital
## 1 NA           State largest city
## 2 NA State capital and largest city
## 3 NA              Federal capital
##
## [[5]]
##     2018rank          City        State[c] 2018estimate
## 1          1   New York[d]        New York    8,398,748
## 2          2   Los Angeles      California    3,990,456
## 3          3       Chicago        Illinois    2,705,994
## 4          4   Houston[3]           Texas    2,325,502
## 5          5       Phoenix         Arizona    1,660,272
## 6          6 Philadelphia[e]   Pennsylvania    1,584,138
## 7          7   San Antonio           Texas    1,532,233
## 8          8     San Diego      California    1,425,976
```

1

```
## 9      9          Dallas              Texas   1,345,047
## 10     10         San Jose        California   1,030,119
## 11     11           Austin             Texas     964,254
## 12     12    Jacksonville[f]         Florida     903,889
## 13     13       Fort Worth             Texas     895,008
## 14     14         Columbus              Ohio     892,533
## 15     15   San Francisco[g]      California     883,305
## 16     16        Charlotte    North Carolina     872,498
## 17     17    Indianapolis[h]          Indiana     867,125
## 18     18          Seattle        Washington     744,955
## 19     19        Denver[i]          Colorado     716,492
## 20     20     Washington[j] District of Columbia 702,455
## 21     21           Boston     Massachusetts     694,583
## 22     22          El Paso             Texas     682,669
## 23     23          Detroit          Michigan     672,662
## 24     24     Nashville[k]         Tennessee     669,053
## 25     25         Portland            Oregon     653,115
## 26     26          Memphis         Tennessee     650,618
## 27     27    Oklahoma City          Oklahoma     649,021
## 28     28        Las Vegas            Nevada     644,644
## 29     29    Louisville[l]          Kentucky     620,118
## 30     30     Baltimore[m]          Maryland     602,495
## 31     31        Milwaukee         Wisconsin     592,025
## 32     32      Albuquerque        New Mexico     560,218
## 33     33           Tucson           Arizona     545,975
## 34     34           Fresno        California     530,093
## 35     35             Mesa           Arizona     508,958
## 36     36       Sacramento        California     508,529
## 37     37          Atlanta           Georgia     498,044
## 38     38      Kansas City          Missouri     491,918
## 39     39  Colorado Springs         Colorado     472,688
## 40     40            Miami           Florida     470,914
## 41     41          Raleigh    North Carolina     469,298
## 42     42            Omaha          Nebraska     468,262
## 43     43       Long Beach        California     467,354
## 44     44 Virginia Beach[m]          Virginia     450,189
## 45     45          Oakland        California     429,082
## 46     46      Minneapolis         Minnesota     425,403
## 47     47            Tulsa          Oklahoma     400,669
## 48     48        Arlington             Texas     398,112
## 49     49            Tampa           Florida     392,890
## 50     50    New Orleans[n]         Louisiana     391,006
## 51     51          Wichita            Kansas     389,255
## 52     52        Cleveland              Ohio     383,793
## 53     53       Bakersfield        California     383,579
## 54     54           Aurora          Colorado     374,114
## 55     55          Anaheim        California     352,005
## 56     56      Honolulu[b]            Hawaii     347,397
## 57     57        Santa Ana        California     332,725
## 58     58        Riverside        California     330,063
## 59     59   Corpus Christi             Texas     326,554
## 60     60     Lexington[o]          Kentucky     323,780
## 61     61         Stockton        California     311,178
## 62     62        Henderson            Nevada     310,390
```

```
## 63    63          Saint Paul          Minnesota     307,695
## 64    64          St. Louis[m]         Missouri     302,838
## 65    65          Cincinnati              Ohio     302,605
## 66    66          Pittsburgh       Pennsylvania     301,048
## 67    67          Greensboro     North Carolina     294,722
## 68    68          Anchorage[p]          Alaska     291,538
## 69    69          Plano                 Texas     288,061
## 70    70          Lincoln            Nebraska     287,401
## 71    71          Orlando             Florida     285,713
## 72    72          Irvine           California     282,572
## 73    73          Newark           New Jersey     282,090
## 74    74          Toledo                 Ohio     274,975
## 75    75          Durham         North Carolina     274,291
## 76    76          Chula Vista      California     271,651
## 77    77          Fort Wayne          Indiana     267,633
## 78    78          Jersey City      New Jersey     265,549
## 79    79       St. Petersburg         Florida     265,098
## 80    80          Laredo                Texas     261,639
## 81    81          Madison           Wisconsin     258,054
## 82    82          Chandler            Arizona     257,165
## 83    83          Buffalo            New York     256,304
## 84    84          Lubbock               Texas     255,885
## 85    85          Scottsdale          Arizona     255,310
## 86    86          Reno                 Nevada     250,998
## 87    87          Glendale            Arizona     250,702
## 88    88          Gilbert[q]          Arizona     248,279
## 89    89       Winston-Salem    North Carolina     246,328
## 90    90     North Las Vegas          Nevada     245,949
## 91    91          Norfolk[m]         Virginia     244,076
## 92    92          Chesapeake[m]      Virginia     242,634
## 93    93          Garland               Texas     242,507
## 94    94          Irving                Texas     242,242
## 95    95          Hialeah             Florida     238,942
## 96    96          Fremont          California     237,807
## 97    97          Boise[r]              Idaho     228,790
## 98    98          Richmond[m]        Virginia     228,783
## 99    99       Baton Rouge[s]       Louisiana     221,599
## 100   100         Spokane          Washington     219,190
## 101   101         Des Moines             Iowa     216,853
## 102   102         Tacoma           Washington     216,279
## 103   103      San Bernardino      California     215,941
## 104   104         Modesto          California     215,030
## 105   105         Fontana          California     213,739
## 106   106      Santa Clarita       California     210,089
## 107   107         Birmingham          Alabama     209,880
## 108   108         Oxnard           California     209,877
## 109   109      Fayetteville    North Carolina     209,468
## 110   110      Moreno Valley       California     209,050
## 111   111         Rochester          New York     206,284
## 112   112         Glendale         California     201,361
## 113   113    Huntington Beach      California     200,641
## 114   114      Salt Lake City           Utah     200,591
## 115   115      Grand Rapids         Michigan     200,217
## 116   116         Amarillo              Texas     199,924
```

```
## 117     117         Yonkers         New York       199,663
## 118     118          Aurora         Illinois       199,602
## 119     119      Montgomery          Alabama       198,218
## 120     120           Akron             Ohio       198,006
## 121     121     Little Rock         Arkansas       197,881
## 122     122       Huntsville          Alabama       197,318
## 123     123      Augusta[t]          Georgia       196,939
## 124     124   Port St. Lucie          Florida       195,248
## 125     125   Grand Prairie            Texas       194,614
## 126     126     Columbus[u]          Georgia       194,160
## 127     127     Tallahassee          Florida       193,551
## 128     128   Overland Park           Kansas       192,536
## 129     129           Tempe          Arizona       192,364
## 130     130        McKinney            Texas       191,645
## 131     131          Mobile          Alabama       189,572
## 132     132       Cape Coral          Florida       189,343
## 133     133      Shreveport        Louisiana       188,987
## 134     134           Frisco            Texas       188,170
## 135     135       Knoxville        Tennessee       187,500
## 136     136       Worcester    Massachusetts       185,877
## 137     137      Brownsville            Texas       183,392
## 138     138       Vancouver       Washington       183,012
## 139     139  Fort Lauderdale          Florida       182,595
## 140     140      Sioux Falls     South Dakota       181,883
## 141     141         Ontario       California       181,107
## 142     142     Chattanooga        Tennessee       180,557
## 143     143      Providence     Rhode Island       179,335
## 144     144  Newport News[m]         Virginia       178,626
## 145     145  Rancho Cucamonga      California       177,751
## 146     146      Santa Rosa       California       177,586
## 147     147       Oceanside       California       176,080
## 148     148           Salem           Oregon       173,442
## 149     149       Elk Grove       California       172,886
## 150     150     Garden Grove       California       172,646
## 151     151   Pembroke Pines          Florida       172,374
## 152     152          Peoria          Arizona       172,259
## 153     153          Eugene           Oregon       171,245
## 154     154          Corona       California       168,819
## 155     155         Cary[v]   North Carolina       168,160
## 156     156     Springfield         Missouri       168,122
## 157     157    Fort Collins         Colorado       167,830
## 158     158         Jackson      Mississippi       164,422
## 159     159    Alexandria[m]         Virginia       160,530
## 160     160         Hayward       California       159,620
## 161     161       Lancaster       California       159,053
## 162     162        Lakewood         Colorado       156,798
## 163     163      Clarksville        Tennessee       156,794
## 164     164        Palmdale       California       156,667
## 165     165         Salinas       California       156,259
## 166     166     Springfield    Massachusetts       155,032
## 167     167       Hollywood          Florida       154,823
## 168     168        Pasadena            Texas       153,219
## 169     169       Sunnyvale       California       153,185
## 170     170        Macon[w]          Georgia       153,095
```

```
## 171    171       Kansas City[x]              Kansas   152,958
## 172    172              Pomona          California   152,361
## 173    173           Escondido          California   152,213
## 174    174             Killeen               Texas   149,103
## 175    175          Naperville            Illinois   148,304
## 176    176              Joliet            Illinois   148,099
## 177    177            Bellevue          Washington   147,599
## 178    178            Rockford            Illinois   146,526
## 179    179            Savannah             Georgia   145,862
## 180    180            Paterson          New Jersey   145,627
## 181    181            Torrance          California   145,182
## 182    182          Bridgeport         Connecticut   144,900
## 183    183             McAllen               Texas   143,433
## 184    184            Mesquite               Texas   142,816
## 185    185            Syracuse            New York   142,749
## 186    186             Midland               Texas   142,344
## 187    187            Pasadena          California   141,371
## 188    188        Murfreesboro           Tennessee   141,344
## 189    189             Miramar             Florida   140,823
## 190    190              Dayton                Ohio   140,640
## 191    191           Fullerton          California   139,640
## 192    192              Olathe              Kansas   139,605
## 193    193              Orange          California   139,484
## 194    194            Thornton            Colorado   139,436
## 195    195           Roseville          California   139,117
## 196    196              Denton               Texas   138,541
## 197    197                Waco               Texas   138,183
## 198    198            Surprise             Arizona   138,161
## 199    199           Carrollton              Texas   136,879
## 200    200    West Valley City                Utah   136,401
## 201    201          Charleston      South Carolina   136,208
## 202    202              Warren            Michigan   134,587
## 203    203          Hampton[m]            Virginia   134,313
## 204    204         Gainesville             Florida   133,857
## 205    205             Visalia          California   133,800
## 206    206        Coral Springs            Florida   133,507
## 207    207            Columbia      South Carolina   133,451
## 208    208         Cedar Rapids                Iowa   133,174
## 209    209     Sterling Heights            Michigan   132,964
## 210    210           New Haven         Connecticut   130,418
## 211    211            Stamford         Connecticut   129,775
## 212    212             Concord          California   129,688
## 213    213                Kent          Washington   129,618
## 214    214         Santa Clara          California   129,488
## 215    215           Elizabeth          New Jersey   128,885
## 216    216          Round Rock               Texas   128,739
## 217    217        Thousand Oaks          California   127,690
## 218    218        Lafayette[y]           Louisiana   126,143
## 219    219            Athens[z]             Georgia   125,964
## 220    220              Topeka              Kansas   125,904
## 221    221         Simi Valley          California   125,851
## 222    222               Fargo        North Dakota   124,844
## 223    223              Norman            Oklahoma   123,471
## 224    224            Columbia            Missouri   123,180
```

```
## 225   225          Abilene             Texas  122,999
## 226   226        Wilmington    North Carolina  122,607
## 227   227          Hartford       Connecticut  122,587
## 228   228        Victorville        California  122,312
## 229   229          Pearland             Texas  122,149
## 230   230           Vallejo        California  121,913
## 231   231         Ann Arbor          Michigan  121,890
## 232   232          Berkeley        California  121,643
## 233   233         Allentown      Pennsylvania  121,433
## 234   234        Richardson             Texas  120,981
## 235   235            Odessa             Texas  120,568
## 236   236            Arvada          Colorado  120,492
## 237   237         Cambridge     Massachusetts  118,977
## 238   238        Sugar Land             Texas  118,600
## 239   239          Beaumont             Texas  118,428
## 240   240           Lansing          Michigan  118,427
## 241   241        Evansville           Indiana  117,963
## 242   242         Rochester         Minnesota  116,961
## 243   243      Independence          Missouri  116,925
## 244   244         Fairfield        California  116,884
## 245   245             Provo              Utah  116,702
## 246   246        Clearwater           Florida  116,478
## 247   247   College Station             Texas  116,218
## 248   248       West Jordan              Utah  116,046
## 249   249          Carlsbad        California  115,877
## 250   250          El Monte        California  115,586
## 251   251          Murrieta        California  114,985
## 252   252          Temecula        California  114,742
## 253   253       Springfield          Illinois  114,694
## 254   254          Palm Bay           Florida  114,194
## 255   255        Costa Mesa        California  113,615
## 256   256       Westminster          Colorado  113,479
## 257   257  North Charleston    South Carolina  113,237
## 258   258     Miami Gardens           Florida  113,069
## 259   259        Manchester     New Hampshire  112,525
## 260   260        High Point    North Carolina  112,316
## 261   261            Downey        California  112,269
## 262   262            Clovis        California  112,022
## 263   263     Pompano Beach           Florida  111,954
## 264   264            Pueblo          Colorado  111,750
## 265   265             Elgin          Illinois  111,683
## 266   266            Lowell     Massachusetts  111,670
## 267   267           Antioch        California  111,535
## 268   268   West Palm Beach           Florida  111,398
## 269   269            Peoria          Illinois  111,388
## 270   270           Everett        Washington  111,262
## 271   271     Ventura[aa]        California  111,128
## 272   272        Centennial          Colorado  110,831
## 273   273          Lakeland           Florida  110,516
## 274   274           Gresham            Oregon  110,158
## 275   275          Richmond        California  110,146
## 276   276          Billings           Montana  109,550
## 277   277         Inglewood        California  109,419
## 278   278      Broken Arrow          Oklahoma  109,171
```

```
## 279     279       Sandy Springs             Georgia    108,797
## 280     280      Jurupa Valley           California    108,393
## 281     281          Hillsboro               Oregon    108,389
## 282     282          Waterbury          Connecticut    108,093
## 283     283        Santa Maria           California    107,408
## 284     284            Boulder             Colorado    107,353
## 285     285            Greeley             Colorado    107,348
## 286     286          Daly City           California    107,008
## 287     287           Meridian                Idaho    106,804
## 288     288         Lewisville                Texas    106,586
## 289     289         Davie[ac]              Florida    106,558
## 290     290        West Covina           California    106,311
## 291     291        League City                Texas    106,244
## 292     292              Tyler                Texas    105,729
## 293     293            Norwalk           California    105,120
## 294     294          San Mateo           California    105,025
## 295     295          Green Bay            Wisconsin    104,879
## 296     296      Wichita Falls                Texas    104,576
## 297     297             Sparks               Nevada    104,246
## 298     298      Lakewood[ad]           New Jersey    104,157
## 299     299            Burbank           California    103,695
## 300     300             Rialto           California    103,440
## 301     301              Allen                Texas    103,383
## 302     302           El Cajon           California    103,241
## 303     303         Las Cruces           New Mexico    102,926
## 304     304             Renton           Washington    102,153
## 305     305          Davenport                 Iowa    102,085
## 306     306         South Bend              Indiana    101,860
## 307     307              Vista           California    101,224
## 308     308         Tuscaloosa              Alabama    101,113
## 309     309       Clinton[ae]             Michigan    100,800
## 310     310         Edison[ad]           New Jersey    100,693
## 311     311    Woodbridge[ad]           New Jersey    100,450
## 312     312         San Angelo                Texas    100,215
## 313     313            Kenosha            Wisconsin    100,164
## 314     314          Vacaville           California    100,154
##     2010Census   Change 2016 land area 2016 land area
## 1   8,175,133   +2.74%      301.5 sq mi       780.9 km2
## 2   3,792,621   +5.22%      468.7 sq mi     1,213.9 km2
## 3   2,695,598   +0.39%      227.3 sq mi       588.7 km2
## 4   2,100,263  +10.72%      637.5 sq mi     1,651.1 km2
## 5   1,445,632  +14.85%      517.6 sq mi     1,340.6 km2
## 6   1,526,006   +3.81%      134.2 sq mi       347.6 km2
## 7   1,327,407  +15.43%      461.0 sq mi     1,194.0 km2
## 8   1,307,402   +9.07%      325.2 sq mi       842.3 km2
## 9   1,197,816  +12.29%      340.9 sq mi       882.9 km2
## 10    945,942   +8.90%      177.5 sq mi       459.7 km2
## 11    790,390  +22.00%      312.7 sq mi       809.9 km2
## 12    821,784   +9.99%      747.4 sq mi     1,935.8 km2
## 13    741,206  +20.75%      342.9 sq mi       888.1 km2
## 14    787,033  +13.40%      218.5 sq mi       565.9 km2
## 15    805,235   +9.70%       46.9 sq mi       121.5 km2
## 16    731,424  +19.29%      305.4 sq mi       791.0 km2
## 17    820,445   +5.69%      361.5 sq mi       936.3 km2
```

```
## 18    608,660 +22.39%    83.8 sq mi      217.0 km2
## 19    600,158 +19.38%   153.3 sq mi      397.0 km2
## 20    601,723 +16.74%    61.1 sq mi      158.2 km2
## 21    617,594 +12.47%    48.3 sq mi      125.1 km2
## 22    649,121  +5.17%   256.8 sq mi      665.1 km2
## 23    713,777  -5.76%   138.8 sq mi      359.5 km2
## 24    601,222 +11.28%   475.9 sq mi    1,232.6 km2
## 25    583,776 +11.88%   133.5 sq mi      345.8 km2
## 26    646,889  +0.58%   317.4 sq mi      822.1 km2
## 27    579,999 +11.90%   606.3 sq mi    1,570.3 km2
## 28    583,756 +10.43%   134.4 sq mi      348.1 km2
## 29    597,337  +3.81%   263.5 sq mi      682.5 km2
## 30    620,961  -2.97%    80.9 sq mi      209.5 km2
## 31    594,833  -0.47%    96.2 sq mi      249.2 km2
## 32    545,852  +2.63%   188.2 sq mi      487.4 km2
## 33    520,116  +4.97%   230.8 sq mi      597.8 km2
## 34    494,665  +7.16%   114.4 sq mi      296.3 km2
## 35    439,041 +15.92%   137.9 sq mi      357.2 km2
## 36    466,488  +9.01%    97.9 sq mi      253.6 km2
## 37    420,003 +18.58%   133.5 sq mi      345.8 km2
## 38    459,787  +6.99%   315.0 sq mi      815.8 km2
## 39    416,427 +13.51%   195.6 sq mi      506.6 km2
## 40    399,457 +17.89%    36.0 sq mi       93.2 km2
## 41    403,892 +16.19%   145.1 sq mi      375.8 km2
## 42    408,958 +14.50%   133.2 sq mi      345.0 km2
## 43    462,257  +1.10%    50.3 sq mi      130.3 km2
## 44    437,994  +2.78%   244.7 sq mi      633.8 km2
## 45    390,724  +9.82%    55.9 sq mi      144.8 km2
## 46    382,578 +11.19%    54.0 sq mi      139.9 km2
## 47    391,906  +2.24%   196.8 sq mi      509.7 km2
## 48    365,438  +8.94%    95.8 sq mi      248.1 km2
## 49    335,709 +17.03%   113.4 sq mi      293.7 km2
## 50    343,829 +13.72%   169.4 sq mi      438.7 km2
## 51    382,368  +1.80%   160.4 sq mi      415.4 km2
## 52    396,815  -3.28%    77.7 sq mi      201.2 km2
## 53    347,483 +10.39%   148.8 sq mi      385.4 km2
## 54    325,078 +15.08%   153.5 sq mi      397.6 km2
## 55    336,265  +4.68%    50.0 sq mi      129.5 km2
## 56    337,256  +3.01%    60.5 sq mi      156.7 km2
## 57    324,528  +2.53%    27.1 sq mi       70.2 km2
## 58    303,871  +8.62%    81.2 sq mi      210.3 km2
## 59    305,215  +6.99%   174.6 sq mi      452.2 km2
## 60    295,803  +9.46%   283.6 sq mi      734.5 km2
## 61    291,707  +6.67%    61.7 sq mi      159.8 km2
## 62    257,729 +20.43%   104.7 sq mi      271.2 km2
## 63    285,068  +7.94%    52.0 sq mi      134.7 km2
## 64    319,294  -5.15%    62.0 sq mi      160.6 km2
## 65    296,943  +1.91%    77.4 sq mi      200.5 km2
## 66    305,704  -1.52%    55.4 sq mi      143.5 km2
## 67    269,666  +9.29%   128.3 sq mi      332.3 km2
## 68    291,826  -0.10% 1,706.6 sq mi    4,420.1 km2
## 69    259,841 +10.86%    71.7 sq mi      185.7 km2
## 70    258,379 +11.23%    92.1 sq mi      238.5 km2
## 71    238,300 +19.90%   105.2 sq mi      272.5 km2
```

```
## 72    212,375 +33.05%    65.6 sq mi    169.9 km2
## 73    277,140  +1.79%    24.1 sq mi     62.4 km2
## 74    287,208  -4.26%    80.7 sq mi    209.0 km2
## 75    228,330 +20.13%   109.8 sq mi    284.4 km2
## 76    243,916 +11.37%    49.6 sq mi    128.5 km2
## 77    253,691  +5.50%   110.6 sq mi    286.5 km2
## 78    247,597  +7.25%    14.8 sq mi     38.3 km2
## 79    244,769  +8.31%    61.8 sq mi    160.1 km2
## 80    236,091 +10.82%   101.1 sq mi    261.8 km2
## 81    233,209 +10.65%    77.0 sq mi    199.4 km2
## 82    236,123  +8.91%    64.9 sq mi    168.1 km2
## 83    261,310  -1.92%    40.4 sq mi    104.6 km2
## 84    229,573 +11.46%   124.6 sq mi    322.7 km2
## 85    217,385 +17.45%   183.9 sq mi    476.3 km2
## 86    225,221 +11.45%   107.3 sq mi    277.9 km2
## 87    226,721 +10.58%    59.1 sq mi    153.1 km2
## 88    208,453 +19.11%    68.0 sq mi    176.1 km2
## 89    229,617  +7.28%   132.5 sq mi    343.2 km2
## 90    216,961 +13.36%    98.0 sq mi    253.8 km2
## 91    242,803  +0.52%    53.3 sq mi    138.0 km2
## 92    222,209  +9.19%   338.5 sq mi    876.7 km2
## 93    226,876  +6.89%    57.0 sq mi    147.6 km2
## 94    216,290 +12.00%    67.0 sq mi    173.5 km2
## 95    224,669  +6.35%    21.5 sq mi     55.7 km2
## 96    214,089 +11.08%    77.5 sq mi    200.7 km2
## 97    205,671 +11.24%    82.1 sq mi    212.6 km2
## 98    204,214 +12.03%    59.8 sq mi    154.9 km2
## 99    229,493  -3.44%    85.9 sq mi    222.5 km2
## 100   208,916  +4.92%    68.7 sq mi    177.9 km2
## 101   203,433  +6.60%    88.9 sq mi    230.2 km2
## 102   198,397  +9.01%    49.7 sq mi    128.7 km2
## 103   209,924  +2.87%    61.5 sq mi    159.3 km2
## 104   201,165  +6.89%    43.0 sq mi    111.4 km2
## 105   196,069  +9.01%    43.0 sq mi    111.4 km2
## 106   176,320 +19.15%    52.8 sq mi    136.8 km2
## 107   212,237  -1.11%   146.1 sq mi    378.4 km2
## 108   197,899  +6.05%    26.9 sq mi     69.7 km2
## 109   200,564  +4.44%   147.7 sq mi    382.5 km2
## 110   193,365  +8.11%    51.3 sq mi    132.9 km2
## 111   210,565  -2.03%    35.8 sq mi     92.7 km2
## 112   191,719  +5.03%    30.4 sq mi     78.7 km2
## 113   189,992  +5.60%    26.9 sq mi     69.7 km2
## 114   186,440  +7.59%   111.2 sq mi    288.0 km2
## 115   188,040  +6.48%    44.4 sq mi    115.0 km2
## 116   190,695  +4.84%   101.4 sq mi    262.6 km2
## 117   195,976  +1.88%    18.0 sq mi     46.6 km2
## 118   197,899  +0.86%    44.9 sq mi    116.3 km2
## 119   205,764  -3.67%   159.8 sq mi    413.9 km2
## 120   199,110  -0.55%    62.0 sq mi    160.6 km2
## 121   193,524  +2.25%   118.7 sq mi    307.4 km2
## 122   180,105  +9.56%   213.4 sq mi    552.7 km2
## 123   195,844  +0.56%   302.5 sq mi    783.5 km2
## 124   164,603 +18.62%   118.9 sq mi    307.9 km2
## 125   175,396 +10.96%    72.3 sq mi    187.3 km2
```

```
## 126    189,885  +2.25%    216.4 sq mi      560.5 km2
## 127    181,376  +6.71%    100.4 sq mi      260.0 km2
## 128    173,372 +11.05%     75.1 sq mi      194.5 km2
## 129    161,719 +18.95%     40.0 sq mi      103.6 km2
## 130    131,117 +46.16%     63.0 sq mi      163.2 km2
## 131    195,111  -2.84%    139.4 sq mi      361.0 km2
## 132    154,305 +22.71%    105.6 sq mi      273.5 km2
## 133    199,311  -5.18%    107.1 sq mi      277.4 km2
## 134    116,989 +60.84%     67.7 sq mi      175.3 km2
## 135    178,874  +4.82%     98.5 sq mi      255.1 km2
## 136    181,045  +2.67%     37.4 sq mi       96.9 km2
## 137    175,023  +4.78%    132.5 sq mi      343.2 km2
## 138    161,791 +13.12%     46.9 sq mi      121.5 km2
## 139    165,521 +10.32%     34.6 sq mi       89.6 km2
## 140    153,888 +18.19%     75.4 sq mi      195.3 km2
## 141    163,924 +10.48%     49.9 sq mi      129.2 km2
## 142    167,674  +7.68%    143.1 sq mi      370.6 km2
## 143    178,042  +0.73%     18.4 sq mi       47.7 km2
## 144    180,719  -1.16%     69.1 sq mi      179.0 km2
## 145    165,269  +7.55%     40.0 sq mi      103.6 km2
## 146    167,815  +5.82%     41.3 sq mi      107.0 km2
## 147    167,086  +5.38%     41.3 sq mi      107.0 km2
## 148    154,637 +12.16%     48.6 sq mi      125.9 km2
## 149    153,015 +12.99%     42.2 sq mi      109.3 km2
## 150    170,883  +1.03%     18.0 sq mi       46.6 km2
## 151    154,019 +11.92%     33.0 sq mi       85.5 km2
## 152    154,065 +11.81%    175.7 sq mi      455.1 km2
## 153    156,185  +9.64%     44.1 sq mi      114.2 km2
## 154    152,374 +10.79%     39.5 sq mi      102.3 km2
## 155    135,234 +24.35%     56.5 sq mi      146.3 km2
## 156    159,498  +5.41%     82.3 sq mi      213.2 km2
## 157    143,986 +16.56%     55.8 sq mi      144.5 km2
## 158    173,514  -5.24%    111.0 sq mi      287.5 km2
## 159    139,966 +14.69%     15.0 sq mi       38.8 km2
## 160    144,186 +10.70%     45.5 sq mi      117.8 km2
## 161    156,633  +1.55%     94.3 sq mi      244.2 km2
## 162    142,980  +9.66%     42.9 sq mi      111.1 km2
## 163    132,929 +17.95%     98.3 sq mi      254.6 km2
## 164    152,750  +2.56%    106.0 sq mi      274.5 km2
## 165    150,441  +3.87%     23.6 sq mi       61.1 km2
## 166    153,060  +1.29%     31.9 sq mi       82.6 km2
## 167    140,768  +9.98%     27.3 sq mi       70.7 km2
## 168    149,043  +2.80%     43.5 sq mi      112.7 km2
## 169    140,081  +9.35%     22.0 sq mi       57.0 km2
## 170     91,351 +67.59%    249.3 sq mi      645.7 km2
## 171    145,786  +4.92%    124.8 sq mi      323.2 km2
## 172    149,058  +2.22%     23.0 sq mi       59.6 km2
## 173    143,911  +5.77%     37.1 sq mi       96.1 km2
## 174    127,921 +16.56%     53.5 sq mi      138.6 km2
## 175    141,853  +4.55%     38.7 sq mi      100.2 km2
## 176    147,433  +0.45%     64.4 sq mi      166.8 km2
## 177    122,363 +20.62%     33.5 sq mi       86.8 km2
## 178    152,871  -4.15%     63.5 sq mi      164.5 km2
## 179    136,286  +7.03%    103.6 sq mi      268.3 km2
```

```
## 180    146,199  -0.39%      8.4 sq mi      21.8 km2
## 181    145,438  -0.18%     20.5 sq mi      53.1 km2
## 182    144,229  +0.47%     16.1 sq mi      41.7 km2
## 183    129,877 +10.44%     58.4 sq mi     151.3 km2
## 184    139,824  +2.14%     47.2 sq mi     122.2 km2
## 185    145,170  -1.67%     25.0 sq mi      64.7 km2
## 186    111,147 +28.07%     74.4 sq mi     192.7 km2
## 187    137,122  +3.10%     23.0 sq mi      59.6 km2
## 188    108,755 +29.97%     55.9 sq mi     144.8 km2
## 189    122,041 +15.39%     29.4 sq mi      76.1 km2
## 190    141,527  -0.63%     55.7 sq mi     144.3 km2
## 191    135,161  +3.31%     22.4 sq mi      58.0 km2
## 192    125,872 +10.91%     60.9 sq mi     157.7 km2
## 193    136,416  +2.25%     25.4 sq mi      65.8 km2
## 194    118,772 +17.40%     35.7 sq mi      92.5 km2
## 195    118,788 +17.11%     43.0 sq mi     111.4 km2
## 196    113,383 +22.19%     93.4 sq mi     241.9 km2
## 197    124,805 +10.72%     89.0 sq mi     230.5 km2
## 198    117,517 +17.57%    107.9 sq mi     279.5 km2
## 199    119,097 +14.93%     36.3 sq mi      94.0 km2
## 200    129,480  +5.35%     35.5 sq mi      91.9 km2
## 201    120,083 +13.43%    109.0 sq mi     282.3 km2
## 202    134,056  +0.40%     34.4 sq mi      89.1 km2
## 203    137,436  -2.27%     51.5 sq mi     133.4 km2
## 204    124,354  +7.64%     62.3 sq mi     161.4 km2
## 205    124,442  +7.52%     37.5 sq mi      97.1 km2
## 206    121,096 +10.25%     23.8 sq mi      61.6 km2
## 207    129,272  +3.23%    133.5 sq mi     345.8 km2
## 208    126,326  +5.42%     70.8 sq mi     183.4 km2
## 209    129,699  +2.52%     36.5 sq mi      94.5 km2
## 210    129,779  +0.49%     18.7 sq mi      48.4 km2
## 211    122,643  +5.82%     37.6 sq mi      97.4 km2
## 212    122,067  +6.24%     30.5 sq mi      79.0 km2
## 213     92,411 +40.26%     33.7 sq mi      87.3 km2
## 214    116,468 +11.18%     18.4 sq mi      47.7 km2
## 215    124,969  +3.13%     12.3 sq mi      31.9 km2
## 216     99,887 +28.88%     35.6 sq mi      92.2 km2
## 217    126,683  +0.79%     55.2 sq mi     143.0 km2
## 218    120,623  +4.58%     53.8 sq mi     139.3 km2
## 219    115,452  +9.11%    116.4 sq mi     301.5 km2
## 220    127,473  -1.23%     61.5 sq mi     159.3 km2
## 221    124,237  +1.30%     41.5 sq mi     107.5 km2
## 222    105,549 +18.28%     49.3 sq mi     127.7 km2
## 223    110,925 +11.31%    178.8 sq mi     463.1 km2
## 224    108,500 +13.53%     65.0 sq mi     168.3 km2
## 225    117,063  +5.07%    106.7 sq mi     276.4 km2
## 226    106,476 +15.15%     51.6 sq mi     133.6 km2
## 227    124,775  -1.75%     17.4 sq mi      45.1 km2
## 228    115,903  +5.53%     73.3 sq mi     189.8 km2
## 229     91,252 +33.86%     46.3 sq mi     119.9 km2
## 230    115,942  +5.15%     30.7 sq mi      79.5 km2
## 231    113,934  +6.98%     28.1 sq mi      72.8 km2
## 232    112,580  +8.05%     10.5 sq mi      27.2 km2
## 233    118,032  +2.88%     17.5 sq mi      45.3 km2
```

```
## 234    99,223 +21.93%    28.6 sq mi      74.1 km2
## 235    99,940 +20.64%    45.2 sq mi     117.1 km2
## 236   106,433 +13.21%    38.6 sq mi     100.0 km2
## 237   105,162 +13.14%     6.4 sq mi      16.6 km2
## 238    78,817 +50.48%    34.0 sq mi      88.1 km2
## 239   118,296  +0.11%    82.1 sq mi     212.6 km2
## 240   114,297  +3.61%    39.1 sq mi     101.3 km2
## 241   117,429  +0.45%    47.3 sq mi     122.5 km2
## 242   106,769  +9.55%    54.6 sq mi     141.4 km2
## 243   116,830  +0.08%    77.8 sq mi     201.5 km2
## 244   105,321 +10.98%    40.9 sq mi     105.9 km2
## 245   112,488  +3.75%    41.7 sq mi     108.0 km2
## 246   107,685  +8.17%    25.9 sq mi      67.1 km2
## 247    93,857 +23.82%    51.0 sq mi     132.1 km2
## 248   103,712 +11.89%    32.3 sq mi      83.7 km2
## 249   105,328 +10.02%    37.7 sq mi      97.6 km2
## 250   113,475  +1.86%     9.6 sq mi      24.9 km2
## 251   103,466 +11.13%    33.6 sq mi      87.0 km2
## 252   100,097 +14.63%    37.3 sq mi      96.6 km2
## 253   116,250  -1.34%    60.1 sq mi     155.7 km2
## 254   103,190 +10.66%    65.7 sq mi     170.2 km2
## 255   109,960  +3.32%    15.7 sq mi      40.7 km2
## 256   106,114  +6.94%    31.7 sq mi      82.1 km2
## 257    97,471 +16.18%    73.7 sq mi     190.9 km2
## 258   107,167  +5.51%    18.2 sq mi      47.1 km2
## 259   109,565  +2.70%    33.1 sq mi      85.7 km2
## 260   104,371  +7.61%    55.2 sq mi     143.0 km2
## 261   111,772  +0.44%    12.4 sq mi      32.1 km2
## 262    95,631 +17.14%    24.2 sq mi      62.7 km2
## 263    99,845 +12.13%    24.0 sq mi      62.2 km2
## 264   106,595  +4.84%    53.6 sq mi     138.8 km2
## 265   108,188  +3.23%    37.4 sq mi      96.9 km2
## 266   106,519  +4.84%    13.6 sq mi      35.2 km2
## 267   102,372  +8.95%    29.4 sq mi      76.1 km2
## 268    99,919 +11.49%    55.1 sq mi     142.7 km2
## 269   115,007  -3.15%    48.2 sq mi     124.8 km2
## 270   103,019  +8.00%    33.3 sq mi      86.2 km2
## 271   106,433  +4.41%    21.8 sq mi      56.5 km2
## 272   100,377 +10.41%    29.5 sq mi      76.4 km2
## 273    97,422 +13.44%    65.9 sq mi     170.7 km2
## 274   105,594  +4.32%    23.3 sq mi      60.3 km2
## 275   103,701  +6.21%    30.1 sq mi      78.0 km2
## 276   104,170  +5.16%    43.7 sq mi     113.2 km2
## 277   109,673  -0.23%     9.1 sq mi      23.6 km2
## 278    98,850 +10.44%    61.7 sq mi     159.8 km2
## 279    93,853 +15.92%    37.7 sq mi      97.6 km2
## 280         0  NA[ab]    42.9 sq mi     111.1 km2
## 281    91,611 +18.31%    25.0 sq mi      64.7 km2
## 282   110,366  -2.06%    28.5 sq mi      73.8 km2
## 283    99,553  +7.89%    22.8 sq mi      59.1 km2
## 284    97,385 +10.24%    24.8 sq mi      64.2 km2
## 285    92,889 +15.57%    47.8 sq mi     123.8 km2
## 286   101,123  +5.82%     7.6 sq mi      19.7 km2
## 287    75,092 +42.23%    29.8 sq mi      77.2 km2
```

```
## 288    95,290 +11.85%    36.7 sq mi      95.1 km2
## 289    91,992 +15.83%    34.9 sq mi      90.4 km2
## 290   106,098  +0.20%    16.0 sq mi      41.4 km2
## 291    83,560 +27.15%    51.2 sq mi     132.6 km2
## 292    96,900  +9.11%    56.6 sq mi     146.6 km2
## 293   105,549  -0.41%     9.7 sq mi      25.1 km2
## 294    97,207  +8.04%    12.1 sq mi      31.3 km2
## 295   104,057  +0.79%    45.4 sq mi     117.6 km2
## 296   104,553  +0.02%    72.2 sq mi     187.0 km2
## 297    90,264 +15.49%    35.9 sq mi      93.0 km2
## 298    92,843 +12.19%    24.7 sq mi      64.0 km2
## 299   103,340  +0.34%    17.4 sq mi      45.1 km2
## 300    99,171  +4.30%    22.3 sq mi      57.8 km2
## 301    84,246 +22.72%    27.1 sq mi      70.2 km2
## 302    99,478  +3.78%    14.5 sq mi      37.6 km2
## 303    97,618  +5.44%    76.9 sq mi     199.2 km2
## 304    90,927 +12.35%    23.4 sq mi      60.6 km2
## 305    99,685  +2.41%    62.9 sq mi     162.9 km2
## 306   101,168  +0.68%    41.4 sq mi     107.2 km2
## 307    93,834  +7.88%    18.7 sq mi      48.4 km2
## 308    90,468 +11.77%    71.7 sq mi     185.7 km2
## 309    96,796  +4.14%    28.1 sq mi      72.8 km2
## 310    99,967  +0.73%    30.1 sq mi      78.0 km2
## 311    99,585  +0.87%    23.3 sq mi      60.3 km2
## 312    93,200  +7.53%    59.9 sq mi     155.1 km2
## 313    99,218  +0.95%    28.0 sq mi      72.5 km2
## 314    92,428  +8.36%    29.0 sq mi      75.1 km2
##      2016 population density 2016 population density
## 1              28,317/sq mi              10,933/km2
## 2               8,484/sq mi               3,276/km2
## 3              11,900/sq mi               4,600/km2
## 4               3,613/sq mi               1,395/km2
## 5               3,120/sq mi               1,200/km2
## 6              11,683/sq mi               4,511/km2
## 7               3,238/sq mi               1,250/km2
## 8               4,325/sq mi               1,670/km2
## 9               3,866/sq mi               1,493/km2
## 10              5,777/sq mi               2,231/km2
## 11              3,031/sq mi               1,170/km2
## 12              1,178/sq mi                 455/km2
## 13              2,491/sq mi                 962/km2
## 14              3,936/sq mi               1,520/km2
## 15             18,569/sq mi               7,170/km2
## 16              2,757/sq mi               1,064/km2
## 17              2,366/sq mi                 914/km2
## 18              8,405/sq mi               3,245/km2
## 19              4,521/sq mi               1,746/km2
## 20             11,148/sq mi               4,304/km2
## 21             13,938/sq mi               5,381/km2
## 22              2,660/sq mi               1,030/km2
## 23              4,847/sq mi               1,871/km2
## 24              1,388/sq mi                 536/km2
## 25              4,793/sq mi               1,851/km2
## 26              2,056/sq mi                 794/km2
```

```
## 27           1,053/sq mi              407/km2
## 28           4,709/sq mi            1,818/km2
## 29           2,339/sq mi              903/km2
## 30           7,598/sq mi            2,934/km2
## 31           6,186/sq mi            2,388/km2
## 32           2,972/sq mi            1,147/km2
## 33           2,299/sq mi              888/km2
## 34           4,563/sq mi            1,762/km2
## 35           3,514/sq mi            1,357/km2
## 36           5,059/sq mi            1,953/km2
## 37           3,539/sq mi            1,366/km2
## 38           1,528/sq mi              590/km2
## 39           2,378/sq mi              918/km2
## 40          12,599/sq mi            4,865/km2
## 41           3,163/sq mi            1,221/km2
## 42           3,356/sq mi            1,296/km2
## 43           9,347/sq mi            3,609/km2
## 44           1,850/sq mi              710/km2
## 45           7,514/sq mi            2,901/km2
## 46           7,660/sq mi            2,960/km2
## 47           2,048/sq mi              791/km2
## 48           4,100/sq mi            1,600/km2
## 49           3,326/sq mi            1,284/km2
## 50           2,311/sq mi              892/km2
## 51           2,431/sq mi              939/km2
## 52           4,965/sq mi            1,917/km2
## 53           2,529/sq mi              976/km2
## 54           2,356/sq mi              910/km2
## 55           7,021/sq mi            2,711/km2
## 56           5,815/sq mi            2,245/km2
## 57          12,333/sq mi            4,762/km2
## 58           3,999/sq mi            1,544/km2
## 59           1,866/sq mi              720/km2
## 60           1,123/sq mi              434/km2
## 61           4,977/sq mi            1,922/km2
## 62           2,798/sq mi            1,080/km2
## 63           5,815/sq mi            2,245/km2
## 64           5,023/sq mi            1,939/km2
## 65           3,860/sq mi            1,490/km2
## 66           5,481/sq mi            2,116/km2
## 67           2,237/sq mi              864/km2
## 68             175/sq mi               68/km2
## 69           3,990/sq mi            1,540/km2
## 70           3,044/sq mi            1,175/km2
## 71           2,635/sq mi            1,017/km2
## 72           4,057/sq mi            1,566/km2
## 73          11,691/sq mi            4,514/km2
## 74           3,451/sq mi            1,332/km2
## 75           2,395/sq mi              925/km2
## 76           5,387/sq mi            2,080/km2
## 77           2,391/sq mi              923/km2
## 78          17,848/sq mi            6,891/km2
## 79           4,223/sq mi            1,631/km2
## 80           2,544/sq mi              982/km2
```

```
## 81            3,280/sq mi              1,270/km2
## 82            3,813/sq mi              1,472/km2
## 83            6,359/sq mi              2,455/km2
## 84            2,027/sq mi                783/km2
## 85            1,341/sq mi                518/km2
## 86            2,286/sq mi                883/km2
## 87            4,161/sq mi              1,607/km2
## 88            3,487/sq mi              1,346/km2
## 89            1,828/sq mi                706/km2
## 90            2,436/sq mi                941/km2
## 91            4,599/sq mi              1,776/km2
## 92              703/sq mi                271/km2
## 93            4,122/sq mi              1,592/km2
## 94            3,557/sq mi              1,373/km2
## 95           10,995/sq mi              4,245/km2
## 96            3,008/sq mi              1,161/km2
## 97            2,718/sq mi              1,049/km2
## 98            3,732/sq mi              1,441/km2
## 99            2,651/sq mi              1,024/km2
## 100           3,144/sq mi              1,214/km2
## 101           2,424/sq mi                936/km2
## 102           4,251/sq mi              1,641/km2
## 103           3,516/sq mi              1,358/km2
## 104           4,934/sq mi              1,905/km2
## 105           4,876/sq mi              1,883/km2
## 106           3,446/sq mi              1,331/km2
## 107           1,452/sq mi                561/km2
## 108           7,729/sq mi              2,984/km2
## 109           1,386/sq mi                535/km2
## 110           4,006/sq mi              1,547/km2
## 111           5,835/sq mi              2,253/km2
## 112           6,606/sq mi              2,551/km2
## 113           7,459/sq mi              2,880/km2
## 114           1,742/sq mi                673/km2
## 115           4,424/sq mi              1,708/km2
## 116           1,968/sq mi                760/km2
## 117          11,156/sq mi              4,307/km2
## 118           4,479/sq mi              1,729/km2
## 119           1,252/sq mi                483/km2
## 120           3,188/sq mi              1,231/km2
## 121           1,673/sq mi                646/km2
## 122             905/sq mi                349/km2
## 123             652/sq mi                252/km2
## 124           1,557/sq mi                601/km2
## 125           2,637/sq mi              1,018/km2
## 126             913/sq mi                353/km2
## 127           1,901/sq mi                734/km2
## 128           2,516/sq mi                971/km2
## 129           4,562/sq mi              1,761/km2
## 130           2,735/sq mi              1,056/km2
## 131           1,384/sq mi                534/km2
## 132           1,703/sq mi                658/km2
## 133           1,820/sq mi                700/km2
## 134           2,417/sq mi                933/km2
```

```
## 135          1,891/sq mi              730/km2
## 136          4,933/sq mi            1,905/km2
## 137          1,387/sq mi              536/km2
## 138          3,728/sq mi            1,439/km2
## 139          5,166/sq mi            1,995/km2
## 140          2,312/sq mi              893/km2
## 141          3,471/sq mi            1,340/km2
## 142          1,241/sq mi              479/km2
## 143          9,740/sq mi            3,760/km2
## 144          2,631/sq mi            1,016/km2
## 145          4,413/sq mi            1,704/km2
## 146          4,241/sq mi            1,637/km2
## 147          4,249/sq mi            1,641/km2
## 148          3,445/sq mi            1,330/km2
## 149          4,022/sq mi            1,553/km2
## 150          9,714/sq mi            3,751/km2
## 151          5,109/sq mi            1,973/km2
## 152            934/sq mi              361/km2
## 153          3,777/sq mi            1,458/km2
## 154          4,222/sq mi            1,630/km2
## 155          2,873/sq mi            1,109/km2
## 156          2,033/sq mi              785/km2
## 157          2,943/sq mi            1,136/km2
## 158          1,524/sq mi              588/km2
## 159         10,387/sq mi            4,010/km2
## 160          3,493/sq mi            1,349/km2
## 161          1,698/sq mi              656/km2
## 162          3,599/sq mi            1,390/km2
## 163          1,529/sq mi              590/km2
## 164          1,484/sq mi              573/km2
## 165          6,662/sq mi            2,572/km2
## 166          4,830/sq mi            1,860/km2
## 167          5,568/sq mi            2,150/km2
## 168          3,525/sq mi            1,361/km2
## 169          6,944/sq mi            2,681/km2
## 170            612/sq mi              236/km2
## 171          1,216/sq mi              470/km2
## 172          6,630/sq mi            2,560/km2
## 173          4,087/sq mi            1,578/km2
## 174          2,680/sq mi            1,030/km2
## 175          3,802/sq mi            1,468/km2
## 176          2,302/sq mi              889/km2
## 177          4,221/sq mi            1,630/km2
## 178          2,325/sq mi              898/km2
## 179          1,417/sq mi              547/km2
## 180         17,500/sq mi            6,800/km2
## 181          7,180/sq mi            2,770/km2
## 182          9,064/sq mi            3,500/km2
## 183          2,435/sq mi              940/km2
## 184          3,045/sq mi            1,176/km2
## 185          5,735/sq mi            2,214/km2
## 186          1,809/sq mi              698/km2
## 187          6,176/sq mi            2,385/km2
## 188          2,360/sq mi              910/km2
```

```
## 189        4,709/sq mi          1,818/km2
## 190        2,522/sq mi            974/km2
## 191        6,282/sq mi          2,425/km2
## 192        2,225/sq mi            859/km2
## 193        5,532/sq mi          2,136/km2
## 194        3,829/sq mi          1,478/km2
## 195        3,085/sq mi          1,191/km2
## 196        1,433/sq mi            553/km2
## 197        1,510/sq mi            580/km2
## 198        1,230/sq mi            470/km2
## 199        3,674/sq mi          1,419/km2
## 200        3,847/sq mi          1,485/km2
## 201        1,233/sq mi            476/km2
## 202        3,928/sq mi          1,517/km2
## 203        2,629/sq mi          1,015/km2
## 204        2,112/sq mi            815/km2
## 205        3,495/sq mi          1,349/km2
## 206        5,465/sq mi          2,110/km2
## 207        1,006/sq mi            388/km2
## 208        1,852/sq mi            715/km2
## 209        3,628/sq mi          1,401/km2
## 210        6,948/sq mi          2,683/km2
## 211        3,434/sq mi          1,326/km2
## 212        4,221/sq mi          1,630/km2
## 213        3,784/sq mi          1,461/km2
## 214        6,845/sq mi          2,643/km2
## 215       10,459/sq mi          4,038/km2
## 216        3,396/sq mi          1,311/km2
## 217        2,335/sq mi            902/km2
## 218        2,372/sq mi            916/km2
## 219        1,060/sq mi            410/km2
## 220        2,062/sq mi            796/km2
## 221        3,044/sq mi          1,175/km2
## 222        2,450/sq mi            950/km2
## 223          683/sq mi            264/km2
## 224        1,856/sq mi            717/km2
## 225        1,146/sq mi            442/km2
## 226        2,278/sq mi            880/km2
## 227        7,083/sq mi          2,735/km2
## 228        1,668/sq mi            644/km2
## 229        2,453/sq mi            947/km2
## 230        3,951/sq mi          1,525/km2
## 231        4,298/sq mi          1,659/km2
## 232       11,547/sq mi          4,458/km2
## 233        6,882/sq mi          2,657/km2
## 234        3,963/sq mi          1,530/km2
## 235        2,608/sq mi          1,007/km2
## 236        3,043/sq mi          1,175/km2
## 237       17,289/sq mi          6,675/km2
## 238        3,488/sq mi          1,347/km2
## 239        1,441/sq mi            556/km2
## 240        2,967/sq mi          1,146/km2
## 241        2,526/sq mi            975/km2
## 242        2,088/sq mi            806/km2
```

```
## 243         1,504/sq mi              581/km2
## 244         2,806/sq mi            1,083/km2
## 245         2,803/sq mi            1,082/km2
## 246         4,415/sq mi            1,705/km2
## 247         2,199/sq mi              849/km2
## 248         3,520/sq mi            1,360/km2
## 249         3,023/sq mi            1,167/km2
## 250        12,063/sq mi            4,658/km2
## 251         3,324/sq mi            1,283/km2
## 252         3,031/sq mi            1,170/km2
## 253         1,925/sq mi              743/km2
## 254         1,676/sq mi              647/km2
## 255         7,186/sq mi            2,775/km2
## 256         3,592/sq mi            1,387/km2
## 257         1,483/sq mi              573/km2
## 258         6,212/sq mi            2,398/km2
## 259         3,339/sq mi            1,289/km2
## 260         2,015/sq mi              778/km2
## 261         9,134/sq mi            3,527/km2
## 262         4,404/sq mi            1,700/km2
## 263         4,558/sq mi            1,760/km2
## 264         2,058/sq mi              795/km2
## 265         2,998/sq mi            1,158/km2
## 266         8,129/sq mi            3,139/km2
## 267         3,772/sq mi            1,456/km2
## 268         1,963/sq mi              758/km2
## 269         2,371/sq mi              915/km2
## 270         3,275/sq mi            1,264/km2
## 271         5,027/sq mi            1,941/km2
## 272         3,727/sq mi            1,439/km2
## 273         1,615/sq mi              624/km2
## 274         4,786/sq mi            1,848/km2
## 275         3,648/sq mi            1,409/km2
## 276         2,525/sq mi              975/km2
## 277        12,160/sq mi            4,700/km2
## 278         1,741/sq mi              672/km2
## 279         2,804/sq mi            1,083/km2
## 280         2,414/sq mi              932/km2
## 281         4,207/sq mi            1,624/km2
## 282         3,799/sq mi            1,467/km2
## 283         4,662/sq mi            1,800/km2
## 284         4,358/sq mi            1,683/km2
## 285         2,176/sq mi              840/km2
## 286        14,009/sq mi            5,409/km2
## 287         3,584/sq mi            1,384/km2
## 288         2,852/sq mi            1,101/km2
## 289         2,919/sq mi            1,127/km2
## 290         6,740/sq mi            2,600/km2
## 291         1,992/sq mi              769/km2
## 292         1,852/sq mi              715/km2
## 293        10,946/sq mi            4,226/km2
## 294         8,592/sq mi            3,317/km2
## 295         2,316/sq mi              894/km2
## 296         1,450/sq mi              560/km2
```

```
## 297            2,810/sq mi                1,080/km2
## 298            4,079/sq mi                1,575/km2
## 299            6,003/sq mi                2,318/km2
## 300            4,633/sq mi                1,789/km2
## 301            3,715/sq mi                1,434/km2
## 302            7,156/sq mi                2,763/km2
## 303            1,323/sq mi                  511/km2
## 304            4,314/sq mi                1,666/km2
## 305            1,631/sq mi                  630/km2
## 306            2,457/sq mi                  949/km2
## 307            5,436/sq mi                2,099/km2
## 308            1,399/sq mi                  540/km2
## 309            3,573/sq mi                1,380/km2
## 310            3,389/sq mi                1,309/km2
## 311            4,351/sq mi                1,680/km2
## 312            1,681/sq mi                  649/km2
## 313            3,577/sq mi                1,381/km2
## 314            3,449/sq mi                1,332/km2
##                                                                           Location
## 1       40°39 49 N 73°56 19 W / 40.6635°N 73.9387°W / 40.6635; -73.9387 (1 New York City)
## 2      34°01 10 N 118°24 39 W / 34.0194°N 118.4108°W / 34.0194; -118.4108 (2 Los Angeles)
## 3          41°50 15 N 87°40 54 W / 41.8376°N 87.6818°W / 41.8376; -87.6818 (3 Chicago)
## 4          29°47 12 N 95°23 27 W / 29.7866°N 95.3909°W / 29.7866; -95.3909 (4 Houston)
## 5       33°34 20 N 112°05 24 W / 33.5722°N 112.0901°W / 33.5722; -112.0901 (6 Phoenix)
## 6     40°00 34 N 75°08 00 W / 40.0094°N 75.1333°W / 40.0094; -75.1333 (5 Philadelphia)
## 7      29°28 21 N 98°31 30 W / 29.4724°N 98.5251°W / 29.4724; -98.5251 (7 San Antonio)
## 8      32°48 55 N 117°08 06 W / 32.8153°N 117.1350°W / 32.8153; -117.1350 (8 San Diego)
## 9          32°47 36 N 96°45 59 W / 32.7933°N 96.7665°W / 32.7933; -96.7665 (9 Dallas)
## 10     37°17 48 N 121°49 08 W / 37.2967°N 121.8189°W / 37.2967; -121.8189 (10 San Jose)
## 11         30°18 14 N 97°45 16 W / 30.3039°N 97.7544°W / 30.3039; -97.7544 (11 Austin)
## 12     30°20 13 N 81°39 42 W / 30.3369°N 81.6616°W / 30.3369; -81.6616 (12 Jacksonville)
## 13     32°46 53 N 97°20 48 W / 32.7815°N 97.3467°W / 32.7815; -97.3467 (16 Fort Worth)
## 14     39°59 07 N 82°59 05 W / 39.9852°N 82.9848°W / 39.9852; -82.9848 (15 Columbus)
## 15  37°43 38 N 123°01 56 W / 37.7272°N 123.0322°W / 37.7272; -123.0322 (13 San Francisco)
## 16     35°12 28 N 80°49 52 W / 35.2078°N 80.8310°W / 35.2078; -80.8310 (17 Charlotte)
## 17   39°46 36 N 86°08 45 W / 39.7767°N 86.1459°W / 39.7767; -86.1459 (14 Indianapolis)
## 18     47°37 14 N 122°21 03 W / 47.6205°N 122.3509°W / 47.6205; -122.3509 (20 Seattle)
## 19        39°45 43 N 104°52 52 W / 39.7619°N 104.8811°W / 39.7619; -104.8811 (Denver)
## 20    38°54 15 N 77°01 02 W / 38.9041°N 77.0172°W / 38.9041; -77.0172 (Washington, D.C.)
## 21           42°19 55 N 71°01 13 W / 42.3320°N 71.0202°W / 42.3320; -71.0202 (Boston)
## 22    31°50 54 N 106°25 37 W / 31.8484°N 106.4270°W / 31.8484; -106.4270 (19 El Paso)
## 23     42°22 59 N 83°06 08 W / 42.3830°N 83.1022°W / 42.3830; -83.1022 (18 Detroit)
## 24        36°10 18 N 86°47 06 W / 36.1718°N 86.7850°W / 36.1718; -86.7850 (Nashville)
## 25        45°32 13 N 122°39 00 W / 45.5370°N 122.6500°W / 45.5370; -122.6500 (Portland)
## 26        35°06 10 N 89°58 39 W / 35.1028°N 89.9774°W / 35.1028; -89.9774 (Memphis)
## 27     35°28 02 N 97°30 49 W / 35.4671°N 97.5137°W / 35.4671; -97.5137 (Oklahoma City)
## 28     36°13 45 N 115°15 36 W / 36.2292°N 115.2601°W / 36.2292; -115.2601 (Las Vegas)
## 29        38°09 55 N 85°38 51 W / 38.1654°N 85.6474°W / 38.1654; -85.6474 (Louisville)
## 30        39°18 00 N 76°36 38 W / 39.3000°N 76.6105°W / 39.3000; -76.6105 (Baltimore)
## 31        43°03 48 N 87°58 00 W / 43.0633°N 87.9667°W / 43.0633; -87.9667 (Milwaukee)
## 32     35°06 20 N 106°38 51 W / 35.1056°N 106.6474°W / 35.1056; -106.6474 (Albuquerque)
## 33       32°09 11 N 110°52 14 W / 32.1531°N 110.8706°W / 32.1531; -110.8706 (Tucson)
## 34       36°47 01 N 119°47 36 W / 36.7836°N 119.7934°W / 36.7836; -119.7934 (Fresno)
## 35       33°24 07 N 111°43 03 W / 33.4019°N 111.7174°W / 33.4019; -111.7174 (Mesa)
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## 36               38°34 00 N 121°28 07 W / 38.5666°N 121.4686°W / 38.5666; -121.4686 (Sacramento)
## 37                 33°45 46 N 84°25 22 W / 33.7629°N 84.4227°W / 33.7629; -84.4227 (Atlanta)
## 38           39°07 30 N 94°33 04 W / 39.1251°N 94.5510°W / 39.1251; -94.5510 (Kansas City, MO)
## 39     38°52 02 N 104°45 39 W / 38.8673°N 104.7607°W / 38.8673; -104.7607 (Colorado Springs)
## 40                     25°46 31 N 80°12 31 W / 25.7752°N 80.2086°W / 25.7752; -80.2086 (Miami)
## 41                  35°49 50 N 78°38 30 W / 35.8306°N 78.6418°W / 35.8306; -78.6418 (Raleigh)
## 42                   41°15 52 N 96°02 42 W / 41.2644°N 96.0451°W / 41.2644; -96.0451 (Omaha)
## 43            33°48 33 N 118°09 19 W / 33.8092°N 118.1553°W / 33.8092; -118.1553 (Long Beach)
## 44        36°46 48 N 76°01 31 W / 36.7800°N 76.0252°W / 36.7800; -76.0252 (Virginia Beach)
## 45          37°46 11 N 122°13 33 W / 37.7698°N 122.2257°W / 37.7698; -122.2257 (Oakland)
## 46         44°57 48 N 93°16 06 W / 44.9633°N 93.2683°W / 44.9633; -93.2683 (Minneapolis)
## 47                36°07 40 N 95°54 08 W / 36.1279°N 95.9023°W / 36.1279; -95.9023 (Tulsa)
## 48          32°42 03 N 97°07 29 W / 32.7007°N 97.1247°W / 32.7007; -97.1247 (Arlington)
## 49                27°58 12 N 82°28 47 W / 27.9701°N 82.4797°W / 27.9701; -82.4797 (Tampa)
## 50         30°03 12 N 89°56 04 W / 30.0534°N 89.9345°W / 30.0534; -89.9345 (New Orleans)
## 51            37°41 27 N 97°20 45 W / 37.6907°N 97.3459°W / 37.6907; -97.3459 (Wichita)
## 52          41°28 43 N 81°40 46 W / 41.4785°N 81.6794°W / 41.4785; -81.6794 (Cleveland)
## 53       35°19 16 N 119°01 06 W / 35.3212°N 119.0183°W / 35.3212; -119.0183 (Bakersfield)
## 54         39°41 17 N 104°41 23 W / 39.6880°N 104.6897°W / 39.6880; -104.6897 (Aurora)
## 55       33°51 20 N 117°45 36 W / 33.8555°N 117.7601°W / 33.8555; -117.7601 (Anaheim)
## 56        21°19 27 N 157°50 51 W / 21.3243°N 157.8476°W / 21.3243; -157.8476 (Honolulu)
## 57       33°44 11 N 117°52 59 W / 33.7363°N 117.8830°W / 33.7363; -117.8830 (Santa Ana)
## 58       33°56 17 N 117°23 36 W / 33.9381°N 117.3932°W / 33.9381; -117.3932 (Riverside)
## 59    27°45 15 N 97°10 24 W / 27.7543°N 97.1734°W / 27.7543; -97.1734 (Corpus Christi)
## 60         38°02 27 N 84°27 30 W / 38.0407°N 84.4583°W / 38.0407; -84.4583 (Lexington)
## 61        37°58 35 N 121°18 48 W / 37.9763°N 121.3133°W / 37.9763; -121.3133 (Stockton)
## 62        36°00 35 N 115°02 09 W / 36.0097°N 115.0357°W / 36.0097; -115.0357 (Henderson)
## 63         44°56 56 N 93°06 15 W / 44.9489°N 93.1041°W / 44.9489; -93.1041 (Saint Paul)
## 64          38°38 09 N 90°14 41 W / 38.6357°N 90.2446°W / 38.6357; -90.2446 (St. Louis)
## 65          39°08 25 N 84°30 21 W / 39.1402°N 84.5058°W / 39.1402; -84.5058 (Cincinnati)
## 66          40°26 23 N 79°58 36 W / 40.4398°N 79.9766°W / 40.4398; -79.9766 (Pittsburgh)
## 67          36°05 42 N 79°49 37 W / 36.0951°N 79.8270°W / 36.0951; -79.8270 (Greensboro)
## 68      61°10 27 N 149°17 03 W / 61.1743°N 149.2843°W / 61.1743; -149.2843 (Anchorage)
## 69              33°03 03 N 96°44 52 W / 33.0508°N 96.7479°W / 33.0508; -96.7479 (Plano)
## 70            40°48 38 N 96°40 49 W / 40.8105°N 96.6803°W / 40.8105; -96.6803 (Lincoln)
## 71            28°25 00 N 81°16 25 W / 28.4166°N 81.2736°W / 28.4166; -81.2736 (Orlando)
## 72       33°40 42 N 117°46 17 W / 33.6784°N 117.7713°W / 33.6784; -117.7713 (Irvine)
## 73            40°43 27 N 74°10 21 W / 40.7242°N 74.1726°W / 40.7242; -74.1726 (Newark)
## 74          41°39 51 N 83°34 55 W / 41.6641°N 83.5819°W / 41.6641; -83.5819 (Toledo)
## 75            35°58 52 N 78°54 10 W / 35.9811°N 78.9029°W / 35.9811; -78.9029 (Durham)
## 76     32°37 40 N 117°00 55 W / 32.6277°N 117.0152°W / 32.6277; -117.0152 (Chula Vista)
## 77         41°05 18 N 85°08 38 W / 41.0882°N 85.1439°W / 41.0882; -85.1439 (Fort Wayne)
## 78        40°42 41 N 74°03 53 W / 40.7114°N 74.0648°W / 40.7114; -74.0648 (Jersey City)
## 79    27°45 43 N 82°38 39 W / 27.7620°N 82.6441°W / 27.7620; -82.6441 (St. Petersburg)
## 80            27°33 37 N 99°29 21 W / 27.5604°N 99.4892°W / 27.5604; -99.4892 (Laredo)
## 81           43°05 16 N 89°25 48 W / 43.0878°N 89.4299°W / 43.0878; -89.4299 (Madison)
## 82        33°16 58 N 111°51 18 W / 33.2829°N 111.8549°W / 33.2829; -111.8549 (Chandler)
## 83           42°53 33 N 78°51 35 W / 42.8925°N 78.8597°W / 42.8925; -78.8597 (Buffalo)
## 84        33°33 56 N 101°53 12 W / 33.5656°N 101.8867°W / 33.5656; -101.8867 (Lubbock)
## 85      33°41 03 N 111°51 40 W / 33.6843°N 111.8611°W / 33.6843; -111.8611 (Scottsdale)
## 86          39°32 57 N 119°51 00 W / 39.5491°N 119.8499°W / 39.5491; -119.8499 (Reno)
## 87       33°31 59 N 112°11 24 W / 33.5331°N 112.1899°W / 33.5331; -112.1899 (Glendale)
## 88       33°18 37 N 111°44 35 W / 33.3103°N 111.7431°W / 33.3103; -111.7431 (Gilbert)
## 89     36°06 10 N 80°15 40 W / 36.1027°N 80.2610°W / 36.1027; -80.2610 (Winston-Salem)
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## 90    36°17 09 N 115°05 38 W / 36.2857°N 115.0939°W / 36.2857; -115.0939 (North Las Vegas)
## 91             36°55 23 N 76°14 41 W / 36.9230°N 76.2446°W / 36.9230; -76.2446 (Norfolk)
## 92             36°40 46 N 76°18 06 W / 36.6794°N 76.3018°W / 36.6794; -76.3018 (Chesapeake)
## 93             32°54 35 N 96°37 49 W / 32.9098°N 96.6303°W / 32.9098; -96.6303 (Garland)
## 94             32°51 28 N 96°58 12 W / 32.8577°N 96.9700°W / 32.8577; -96.9700 (Irving)
## 95             25°52 12 N 80°18 10 W / 25.8699°N 80.3029°W / 25.8699; -80.3029 (Hialeah)
## 96             37°29 40 N 121°56 28 W / 37.4945°N 121.9412°W / 37.4945; -121.9412 (Fremont)
## 97             43°36 01 N 116°13 54 W / 43.6002°N 116.2317°W / 43.6002; -116.2317 (Boise)
## 98             37°31 53 N 77°28 34 W / 37.5314°N 77.4760°W / 37.5314; -77.4760 (Richmond)
## 99             30°26 32 N 91°07 51 W / 30.4422°N 91.1309°W / 30.4422; -91.1309 (Baton Rouge)
## 100            47°40 01 N 117°26 00 W / 47.6669°N 117.4333°W / 47.6669; -117.4333 (Spokane)
## 101            41°34 21 N 93°36 37 W / 41.5726°N 93.6102°W / 41.5726; -93.6102 (Des Moines)
## 102            47°15 08 N 122°27 35 W / 47.2522°N 122.4598°W / 47.2522; -122.4598 (Tacoma)
## 103    34°08 30 N 117°17 37 W / 34.1416°N 117.2936°W / 34.1416; -117.2936 (San Bernardino)
## 104            37°38 15 N 121°00 11 W / 37.6375°N 121.0030°W / 37.6375; -121.0030 (Modesto)
## 105            34°06 32 N 117°27 46 W / 34.1090°N 117.4629°W / 34.1090; -117.4629 (Fontana)
## 106    34°24 11 N 118°30 15 W / 34.4030°N 118.5042°W / 34.4030; -118.5042 (Santa Clarita)
## 107            33°31 39 N 86°47 56 W / 33.5274°N 86.7990°W / 33.5274; -86.7990 (Birmingham)
## 108            34°12 08 N 119°12 17 W / 34.2023°N 119.2046°W / 34.2023; -119.2046 (Oxnard)
## 109    35°04 58 N 78°58 25 W / 35.0828°N 78.9735°W / 35.0828; -78.9735 (Fayetteville)
## 110    33°55 24 N 117°12 21 W / 33.9233°N 117.2057°W / 33.9233; -117.2057 (Moreno Valley)
## 111            43°10 12 N 77°37 01 W / 43.1699°N 77.6169°W / 43.1699; -77.6169 (Rochester)
## 112            34°10 53 N 118°14 45 W / 34.1814°N 118.2458°W / 34.1814; -118.2458 (Glendale)
## 113 33°41 26 N 118°00 33 W / 33.6906°N 118.0093°W / 33.6906; -118.0093 (Huntington Beach)
## 114    40°46 37 N 111°55 52 W / 40.7769°N 111.9310°W / 40.7769; -111.9310 (Salt Lake City)
## 115            42°57 40 N 85°39 20 W / 42.9612°N 85.6556°W / 42.9612; -85.6556 (Grand Rapids)
## 116            35°12 00 N 101°49 49 W / 35.1999°N 101.8302°W / 35.1999; -101.8302 (Amarillo)
## 117            40°56 45 N 73°52 03 W / 40.9459°N 73.8674°W / 40.9459; -73.8674 (Yonkers)
## 118            41°45 49 N 88°17 24 W / 41.7635°N 88.2901°W / 41.7635; -88.2901 (Aurora)
## 119            32°20 50 N 86°15 58 W / 32.3472°N 86.2661°W / 32.3472; -86.2661 (Montgomery)
## 120            41°04 50 N 81°31 17 W / 41.0805°N 81.5214°W / 41.0805; -81.5214 (Akron)
## 121            34°43 31 N 92°21 31 W / 34.7254°N 92.3586°W / 34.7254; -92.3586 (Little Rock)
## 122            34°41 56 N 86°40 23 W / 34.6990°N 86.6730°W / 34.6990; -86.6730 (Huntsville)
## 123            33°21 56 N 82°04 24 W / 33.3655°N 82.0734°W / 33.3655; -82.0734 (Augusta)
## 124    27°16 50 N 80°23 18 W / 27.2806°N 80.3883°W / 27.2806; -80.3883 (Port St. Lucie)
## 125    32°41 13 N 97°01 16 W / 32.6869°N 97.0211°W / 32.6869; -97.0211 (Grand Prairie)
## 126            32°30 37 N 84°52 30 W / 32.5102°N 84.8749°W / 32.5102; -84.8749 (Columbus)
## 127            30°27 18 N 84°15 12 W / 30.4551°N 84.2534°W / 30.4551; -84.2534 (Tallahassee)
## 128    38°53 20 N 94°41 26 W / 38.8890°N 94.6906°W / 38.8890; -94.6906 (Overland Park)
## 129            33°23 18 N 111°55 54 W / 33.3884°N 111.9318°W / 33.3884; -111.9318 (Tempe)
## 130            33°11 55 N 96°40 05 W / 33.1985°N 96.6680°W / 33.1985; -96.6680 (McKinney)
## 131            30°40 06 N 88°06 01 W / 30.6684°N 88.1002°W / 30.6684; -88.1002 (Mobile)
## 132            26°38 36 N 81°59 51 W / 26.6432°N 81.9974°W / 26.6432; -81.9974 (Cape Coral)
## 133            32°28 01 N 93°47 32 W / 32.4669°N 93.7922°W / 32.4669; -93.7922 (Shreveport)
## 134            33°09 19 N 96°49 21 W / 33.1554°N 96.8226°W / 33.1554; -96.8226 (Frisco)
## 135            35°58 15 N 83°56 57 W / 35.9707°N 83.9493°W / 35.9707; -83.9493 (Knoxville)
## 136            42°16 10 N 71°48 28 W / 42.2695°N 71.8078°W / 42.2695; -71.8078 (Worcester)
## 137            25°59 57 N 97°27 18 W / 25.9991°N 97.4550°W / 25.9991; -97.4550 (Brownsville)
## 138    45°38 06 N 122°35 45 W / 45.6349°N 122.5957°W / 45.6349; -122.5957 (Vancouver)
## 139    26°08 28 N 80°08 48 W / 26.1412°N 80.1467°W / 26.1412; -80.1467 (Fort Lauderdale)
## 140            43°32 18 N 96°43 55 W / 43.5383°N 96.7320°W / 43.5383; -96.7320 (Sioux Falls)
## 141            34°02 22 N 117°36 15 W / 34.0394°N 117.6042°W / 34.0394; -117.6042 (Ontario)
## 142            35°03 58 N 85°14 54 W / 35.0660°N 85.2484°W / 35.0660; -85.2484 (Chattanooga)
## 143            41°49 23 N 71°25 08 W / 41.8231°N 71.4188°W / 41.8231; -71.4188 (Providence)
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## 144            37°04 34 N 76°31 19 W / 37.0762°N 76.5220°W / 37.0762; -76.5220 (Newport News)
## 145 34°07 24 N 117°33 51 W / 34.1233°N 117.5642°W / 34.1233; -117.5642 (Rancho Cucamonga)
## 146            38°26 48 N 122°42 22 W / 38.4468°N 122.7061°W / 38.4468; -122.7061 (Santa Rosa)
## 147            33°13 28 N 117°18 22 W / 33.2245°N 117.3062°W / 33.2245; -117.3062 (Oceanside)
## 148            44°55 25 N 123°01 24 W / 44.9237°N 123.0232°W / 44.9237; -123.0232 (Salem)
## 149            38°24 53 N 121°23 06 W / 38.4146°N 121.3850°W / 38.4146; -121.3850 (Elk Grove)
## 150            33°46 44 N 117°57 38 W / 33.7788°N 117.9605°W / 33.7788; -117.9605 (Garden Grove)
## 151            26°01 16 N 80°20 25 W / 26.0210°N 80.3404°W / 26.0210; -80.3404 (Pembroke Pines)
## 152            33°47 10 N 112°18 29 W / 33.7862°N 112.3080°W / 33.7862; -112.3080 (Peoria)
## 153            44°03 24 N 123°06 58 W / 44.0567°N 123.1162°W / 44.0567; -123.1162 (Eugene)
## 154            33°51 43 N 117°33 56 W / 33.8620°N 117.5655°W / 33.8620; -117.5655 (Corona)
## 155            35°46 51 N 78°48 48 W / 35.7809°N 78.8133°W / 35.7809; -78.8133 (Cary)
## 156            37°11 39 N 93°17 29 W / 37.1942°N 93.2913°W / 37.1942; -93.2913 (Springfield)
## 157            40°32 54 N 105°03 53 W / 40.5482°N 105.0648°W / 40.5482; -105.0648 (Fort Collins)
## 158            32°18 57 N 90°12 46 W / 32.3158°N 90.2128°W / 32.3158; -90.2128 (Jackson)
## 159            38°49 12 N 77°05 03 W / 38.8201°N 77.0841°W / 38.8201; -77.0841 (Alexandria)
## 160            37°37 43 N 122°06 09 W / 37.6287°N 122.1024°W / 37.6287; -122.1024 (Hayward)
## 161            34°41 37 N 118°10 31 W / 34.6936°N 118.1753°W / 34.6936; -118.1753 (Lancaster)
## 162            39°41 56 N 105°07 03 W / 39.6989°N 105.1176°W / 39.6989; -105.1176 (Lakewood)
## 163            36°33 59 N 87°20 43 W / 36.5664°N 87.3452°W / 36.5664; -87.3452 (Clarksville)
## 164            34°35 28 N 118°06 19 W / 34.5910°N 118.1054°W / 34.5910; -118.1054 (Palmdale)
## 165            36°41 25 N 121°38 01 W / 36.6902°N 121.6337°W / 36.6902; -121.6337 (Salinas)
## 166            42°06 56 N 72°32 24 W / 42.1155°N 72.5400°W / 42.1155; -72.5400 (Springfield)
## 167            26°01 52 N 80°09 53 W / 26.0310°N 80.1646°W / 26.0310; -80.1646 (Hollywood)
## 168            29°39 31 N 95°09 02 W / 29.6586°N 95.1506°W / 29.6586; -95.1506 (Pasadena)
## 169            37°23 09 N 122°01 35 W / 37.3858°N 122.0263°W / 37.3858; -122.0263 (Sunnyvale)
## 170            32°48 32 N 83°41 39 W / 32.8088°N 83.6942°W / 32.8088; -83.6942 (Macon)
## 171            39°07 21 N 94°44 30 W / 39.1225°N 94.7418°W / 39.1225; -94.7418 (Kansas City)
## 172            34°03 31 N 117°45 40 W / 34.0585°N 117.7611°W / 34.0585; -117.7611 (Pomona)
## 173            33°07 59 N 117°04 26 W / 33.1331°N 117.0740°W / 33.1331; -117.0740 (Escondido)
## 174            31°04 40 N 97°43 55 W / 31.0777°N 97.7320°W / 31.0777; -97.7320 (Killeen)
## 175            41°44 57 N 88°09 43 W / 41.7492°N 88.1620°W / 41.7492; -88.1620 (Naperville)
## 176            41°31 04 N 88°08 56 W / 41.5177°N 88.1488°W / 41.5177; -88.1488 (Joliet)
## 177            47°35 52 N 122°09 23 W / 47.5979°N 122.1565°W / 47.5979; -122.1565 (Bellevue)
## 178            42°15 32 N 89°03 53 W / 42.2588°N 89.0646°W / 42.2588; -89.0646 (Rockford)
## 179            32°00 09 N 81°09 13 W / 32.0025°N 81.1536°W / 32.0025; -81.1536 (Savannah)
## 180            40°54 53 N 74°09 46 W / 40.9148°N 74.1628°W / 40.9148; -74.1628 (Paterson)
## 181            33°50 06 N 118°20 29 W / 33.8350°N 118.3414°W / 33.8350; -118.3414 (Torrance)
## 182            41°11 15 N 73°11 45 W / 41.1874°N 73.1958°W / 41.1874; -73.1958 (Bridgeport)
## 183            26°13 56 N 98°14 47 W / 26.2322°N 98.2464°W / 26.2322; -98.2464 (McAllen)
## 184            32°45 46 N 96°35 20 W / 32.7629°N 96.5888°W / 32.7629; -96.5888 (Mesquite)
## 185            43°02 28 N 76°08 37 W / 43.0410°N 76.1436°W / 43.0410; -76.1436 (Syracuse)
## 186            32°01 29 N 102°06 49 W / 32.0246°N 102.1135°W / 32.0246; -102.1135 (Midland)
## 187            34°09 38 N 118°08 23 W / 34.1606°N 118.1396°W / 34.1606; -118.1396 (Pasadena)
## 188            35°51 08 N 86°24 58 W / 35.8522°N 86.4160°W / 35.8522; -86.4160 (Murfreesboro)
## 189            25°58 37 N 80°20 09 W / 25.9770°N 80.3358°W / 25.9770; -80.3358 (Miramar)
## 190            39°46 39 N 84°11 59 W / 39.7774°N 84.1996°W / 39.7774; -84.1996 (Dayton)
## 191            33°53 09 N 117°55 41 W / 33.8857°N 117.9280°W / 33.8857; -117.9280 (Fullerton)
## 192            38°53 03 N 94°49 10 W / 38.8843°N 94.8195°W / 38.8843; -94.8195 (Olathe)
## 193            33°47 13 N 117°51 41 W / 33.7870°N 117.8613°W / 33.7870; -117.8613 (Orange)
## 194            39°55 10 N 104°56 34 W / 39.9194°N 104.9428°W / 39.9194; -104.9428 (Thornton)
## 195            38°46 08 N 121°19 08 W / 38.7690°N 121.3189°W / 38.7690; -121.3189 (Roseville)
## 196            33°13 00 N 97°08 29 W / 33.2166°N 97.1414°W / 33.2166; -97.1414 (Denton)
## 197            31°33 36 N 97°11 10 W / 31.5601°N 97.1860°W / 31.5601; -97.1860 (Waco)
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## 198          33°40 14 N 112°27 10 W / 33.6706°N 112.4527°W / 33.6706; -112.4527 (Surprise)
## 199          32°59 18 N 96°53 59 W / 32.9884°N 96.8998°W / 32.9884; -96.8998 (Carrollton)
## 200 40°41 19 N 112°00 42 W / 40.6885°N 112.0118°W / 40.6885; -112.0118 (West Valley City)
## 201          32°49 04 N 79°57 32 W / 32.8179°N 79.9590°W / 32.8179; -79.9590 (Charleston)
## 202          42°29 34 N 83°01 30 W / 42.4929°N 83.0250°W / 42.4929; -83.0250 (Warren)
## 203          37°02 53 N 76°17 50 W / 37.0480°N 76.2971°W / 37.0480; -76.2971 (Hampton)
## 204          29°40 44 N 82°20 46 W / 29.6788°N 82.3461°W / 29.6788; -82.3461 (Gainesville)
## 205          36°19 38 N 119°19 44 W / 36.3273°N 119.3289°W / 36.3273; -119.3289 (Visalia)
## 206          26°16 15 N 80°15 33 W / 26.2707°N 80.2593°W / 26.2707; -80.2593 (Coral Springs)
## 207          34°01 45 N 80°53 53 W / 34.0291°N 80.8980°W / 34.0291; -80.8980 (Columbia)
## 208          41°58 01 N 91°40 40 W / 41.9670°N 91.6778°W / 41.9670; -91.6778 (Cedar Rapids)
## 209 42°34 52 N 83°01 49 W / 42.5812°N 83.0303°W / 42.5812; -83.0303 (Sterling Heights)
## 210          41°18 39 N 72°55 30 W / 41.3108°N 72.9250°W / 41.3108; -72.9250 (New Haven)
## 211          41°04 48 N 73°32 46 W / 41.0799°N 73.5460°W / 41.0799; -73.5460 (Stamford)
## 212          37°58 20 N 122°00 06 W / 37.9722°N 122.0016°W / 37.9722; -122.0016 (Concord)
## 213          47°23 17 N 122°12 46 W / 47.3880°N 122.2127°W / 47.3880; -122.2127 (Kent)
## 214 37°21 53 N 121°58 04 W / 37.3646°N 121.9679°W / 37.3646; -121.9679 (Santa Clara)
## 215          40°39 59 N 74°11 37 W / 40.6664°N 74.1935°W / 40.6664; -74.1935 (Elizabeth)
## 216          30°31 31 N 97°39 58 W / 30.5252°N 97.6660°W / 30.5252; -97.6660 (Round Rock)
## 217 34°11 36 N 118°52 27 W / 34.1933°N 118.8742°W / 34.1933; -118.8742 (Thousand Oaks)
## 218          30°12 27 N 92°01 43 W / 30.2074°N 92.0285°W / 30.2074; -92.0285 (Lafayette)
## 219          33°56 59 N 83°22 12 W / 33.9496°N 83.3701°W / 33.9496; -83.3701 (Athens)
## 220          39°02 05 N 95°41 46 W / 39.0347°N 95.6962°W / 39.0347; -95.6962 (Topeka)
## 221 34°16 01 N 118°44 55 W / 34.2669°N 118.7485°W / 34.2669; -118.7485 (Simi Valley)
## 222          46°51 55 N 96°49 44 W / 46.8652°N 96.8290°W / 46.8652; -96.8290 (Fargo)
## 223          35°14 26 N 97°20 43 W / 35.2406°N 97.3453°W / 35.2406; -97.3453 (Norman)
## 224 38°57 06 N 92°19 43 W / 38.951561°N 92.328638°W / 38.951561; -92.328638 (Columbia)
## 225          32°27 16 N 99°44 17 W / 32.4545°N 99.7381°W / 32.4545; -99.7381 (Abilene)
## 226          34°12 33 N 77°53 09 W / 34.2092°N 77.8858°W / 34.2092; -77.8858 (Wilmington)
## 227          41°45 57 N 72°40 54 W / 41.7659°N 72.6816°W / 41.7659; -72.6816 (Hartford)
## 228 34°31 40 N 117°21 13 W / 34.5277°N 117.3536°W / 34.5277; -117.3536 (Victorville)
## 229          29°33 21 N 95°19 23 W / 29.5558°N 95.3231°W / 29.5558; -95.3231 (Pearland)
## 230          38°06 28 N 122°15 50 W / 38.1079°N 122.2640°W / 38.1079; -122.2640 (Vallejo)
## 231          42°16 34 N 83°43 51 W / 42.2761°N 83.7309°W / 42.2761; -83.7309 (Ann Arbor)
## 232          37°52 01 N 122°17 57 W / 37.8670°N 122.2991°W / 37.8670; -122.2991 (Berkeley)
## 233          40°35 37 N 75°28 42 W / 40.5936°N 75.4784°W / 40.5936; -75.4784 (Allentown)
## 234          32°58 20 N 96°42 29 W / 32.9723°N 96.7081°W / 32.9723; -96.7081 (Richardson)
## 235          31°53 02 N 102°20 28 W / 31.8838°N 102.3411°W / 31.8838; -102.3411 (Odessa)
## 236          39°50 01 N 105°09 01 W / 39.8337°N 105.1503°W / 39.8337; -105.1503 (Arvada)
## 237          42°22 34 N 71°07 07 W / 42.3760°N 71.1187°W / 42.3760; -71.1187 (Cambridge)
## 238          29°35 58 N 95°36 51 W / 29.5994°N 95.6142°W / 29.5994; -95.6142 (Sugar Land)
## 239          30°05 06 N 94°08 43 W / 30.0849°N 94.1453°W / 30.0849; -94.1453 (Beaumont)
## 240          42°42 51 N 84°33 33 W / 42.7143°N 84.5593°W / 42.7143; -84.5593 (Lansing)
## 241          37°59 16 N 87°32 05 W / 37.9877°N 87.5347°W / 37.9877; -87.5347 (Evansville)
## 242          44°00 55 N 92°28 38 W / 44.0154°N 92.4772°W / 44.0154; -92.4772 (Rochester)
## 243          39°05 08 N 94°21 08 W / 39.0855°N 94.3521°W / 39.0855; -94.3521 (Independence)
## 244          38°15 33 N 122°01 56 W / 38.2593°N 122.0321°W / 38.2593; -122.0321 (Fairfield)
## 245          40°14 43 N 111°38 41 W / 40.2453°N 111.6448°W / 40.2453; -111.6448 (Provo)
## 246          27°58 44 N 82°46 00 W / 27.9789°N 82.7666°W / 27.9789; -82.7666 (Clearwater)
## 247 30°35 07 N 96°17 47 W / 30.5852°N 96.2964°W / 30.5852; -96.2964 (College Station)
## 248 40°36 09 N 112°00 03 W / 40.6024°N 112.0008°W / 40.6024; -112.0008 (West Jordan)
## 249          33°07 26 N 117°16 58 W / 33.1239°N 117.2828°W / 33.1239; -117.2828 (Carlsbad)
## 250          34°04 29 N 118°01 45 W / 34.0746°N 118.0291°W / 34.0746; -118.0291 (El Monte)
## 251          33°34 20 N 117°11 25 W / 33.5721°N 117.1904°W / 33.5721; -117.1904 (Murrieta)
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## 252           33°29 35 N 117°07 54 W / 33.4931°N 117.1317°W / 33.4931; -117.1317 (Temecula)
## 253           39°47 28 N 89°38 41 W / 39.7911°N 89.6446°W / 39.7911; -89.6446 (Springfield)
## 254            27°59 08 N 80°39 45 W / 27.9856°N 80.6626°W / 27.9856; -80.6626 (Palm Bay)
## 255           33°39 57 N 117°54 44 W / 33.6659°N 117.9123°W / 33.6659; -117.9123 (Costa Mesa)
## 256           39°52 56 N 105°03 52 W / 39.8822°N 105.0644°W / 39.8822; -105.0644 (Westminster)
## 257  32°55 04 N 80°03 54 W / 32.9178°N 80.0650°W / 32.9178; -80.0650 (North Charleston)
## 258      25°56 56 N 80°14 37 W / 25.9489°N 80.2436°W / 25.9489; -80.2436 (Miami Gardens)
## 259           42°59 06 N 71°26 39 W / 42.9849°N 71.4441°W / 42.9849; -71.4441 (Manchester)
## 260           35°59 24 N 79°59 26 W / 35.9900°N 79.9905°W / 35.9900; -79.9905 (High Point)
## 261           33°56 18 N 118°07 51 W / 33.9382°N 118.1309°W / 33.9382; -118.1309 (Downey)
## 262           36°49 42 N 119°41 06 W / 36.8282°N 119.6849°W / 36.8282; -119.6849 (Clovis)
## 263      26°14 30 N 80°08 02 W / 26.2416°N 80.1339°W / 26.2416; -80.1339 (Pompano Beach)
## 264           38°16 12 N 104°36 44 W / 38.2699°N 104.6123°W / 38.2699; -104.6123 (Pueblo)
## 265             42°02 23 N 88°19 18 W / 42.0396°N 88.3217°W / 42.0396; -88.3217 (Elgin)
## 266             42°38 20 N 71°19 16 W / 42.6390°N 71.3211°W / 42.6390; -71.3211 (Lowell)
## 267           37°58 45 N 121°47 46 W / 37.9791°N 121.7962°W / 37.9791; -121.7962 (Antioch)
## 268  26°44 47 N 80°07 30 W / 26.7464°N 80.1251°W / 26.7464; -80.1251 (West Palm Beach)
## 269             40°45 05 N 89°37 03 W / 40.7515°N 89.6174°W / 40.7515; -89.6174 (Peoria)
## 270           47°57 24 N 122°11 29 W / 47.9566°N 122.1914°W / 47.9566; -122.1914 (Everett)
## 271           34°16 04 N 119°15 15 W / 34.2678°N 119.2542°W / 34.2678; -119.2542 (Ventura)
## 272           39°35 26 N 104°52 09 W / 39.5906°N 104.8691°W / 39.5906; -104.8691 (Centennial)
## 273            28°03 20 N 81°57 18 W / 28.0555°N 81.9549°W / 28.0555; -81.9549 (Lakeland)
## 274           45°30 08 N 122°26 30 W / 45.5023°N 122.4416°W / 45.5023; -122.4416 (Gresham)
## 275           37°57 08 N 122°21 38 W / 37.9523°N 122.3606°W / 37.9523; -122.3606 (Richmond)
## 276           45°47 19 N 108°33 00 W / 45.7885°N 108.5499°W / 45.7885; -108.5499 (Billings)
## 277           33°57 22 N 118°20 39 W / 33.9561°N 118.3443°W / 33.9561; -118.3443 (Inglewood)
## 278           36°02 11 N 95°46 52 W / 36.0365°N 95.7810°W / 36.0365; -95.7810 (Broken Arrow)
## 279           33°55 53 N 84°22 07 W / 33.9315°N 84.3687°W / 33.9315; -84.3687 (Sandy Springs)
## 280  34°00 09 N 117°28 03 W / 34.0026°N 117.4676°W / 34.0026; -117.4676 (Jurupa Valley)
## 281           45°31 41 N 122°56 09 W / 45.5280°N 122.9357°W / 45.5280; -122.9357 (Hillsboro)
## 282             41°33 31 N 73°02 12 W / 41.5585°N 73.0367°W / 41.5585; -73.0367 (Waterbury)
## 283           34°56 00 N 120°26 38 W / 34.9332°N 120.4438°W / 34.9332; -120.4438 (Santa Maria)
## 284           40°01 37 N 105°15 07 W / 40.0270°N 105.2519°W / 40.0270; -105.2519 (Boulder)
## 285           40°24 55 N 104°46 11 W / 40.4153°N 104.7697°W / 40.4153; -104.7697 (Greeley)
## 286           37°42 03 N 122°27 54 W / 37.7009°N 122.4650°W / 37.7009; -122.4650 (Daly City)
## 287           43°36 51 N 116°23 56 W / 43.6142°N 116.3989°W / 43.6142; -116.3989 (Meridian)
## 288           33°02 48 N 96°58 54 W / 33.0466°N 96.9818°W / 33.0466; -96.9818 (Lewisville)
## 289             26°04 45 N 80°17 06 W / 26.0791°N 80.2850°W / 26.0791; -80.2850 (Davie)
## 290  34°03 21 N 117°54 36 W / 34.0559°N 117.9099°W / 34.0559; -117.9099 (West Covina)
## 291           29°29 24 N 95°06 33 W / 29.4901°N 95.1091°W / 29.4901; -95.1091 (League City)
## 292             32°19 02 N 95°18 21 W / 32.3173°N 95.3059°W / 32.3173; -95.3059 (Tyler)
## 293           33°54 27 N 118°05 01 W / 33.9076°N 118.0835°W / 33.9076; -118.0835 (Norwalk)
## 294           37°33 37 N 122°18 38 W / 37.5603°N 122.3106°W / 37.5603; -122.3106 (San Mateo)
## 295            44°31 15 N 87°59 03 W / 44.5207°N 87.9842°W / 44.5207; -87.9842 (Green Bay)
## 296  33°54 24 N 98°31 33 W / 33.9067°N 98.5259°W / 33.9067; -98.5259 (Wichita Falls)
## 297           39°33 16 N 119°44 08 W / 39.5544°N 119.7356°W / 39.5544; -119.7356 (Sparks)
## 298           40°04 38 N 74°12 01 W / 40.0771°N 74.2004°W / 40.0771; -74.2004 (Lakewood)
## 299           34°11 24 N 118°19 35 W / 34.1901°N 118.3264°W / 34.1901; -118.3264 (Burbank)
## 300           34°06 42 N 117°23 18 W / 34.1118°N 117.3883°W / 34.1118; -117.3883 (Rialto)
## 301             33°05 59 N 96°39 47 W / 33.0997°N 96.6631°W / 33.0997; -96.6631 (Allen)
## 302           32°48 06 N 116°57 37 W / 32.8017°N 116.9604°W / 32.8017; -116.9604 (El Cajon)
## 303           32°19 35 N 106°47 23 W / 32.3264°N 106.7897°W / 32.3264; -106.7897 (Las Cruces)
## 304           47°28 34 N 122°11 31 W / 47.4761°N 122.1920°W / 47.4761; -122.1920 (Renton)
## 305           41°33 15 N 90°36 14 W / 41.5541°N 90.6040°W / 41.5541; -90.6040 (Davenport)
```

```
## 306             41°40 37 N 86°16 08 W / 41.6769°N 86.2690°W / 41.6769; -86.2690 (South Bend)
## 307              33°11 22 N 117°14 19 W / 33.1895°N 117.2386°W / 33.1895; -117.2386 (Vista)
## 308             33°12 23 N 87°32 05 W / 33.2065°N 87.5346°W / 33.2065; -87.5346 (Tuscaloosa)
## 309              42°35 25 N 82°55 01 W / 42.5903°N 82.9170°W / 42.5903; -82.9170 (Clinton)
## 310              40°30 14 N 74°20 58 W / 40.5040°N 74.3494°W / 40.5040; -74.3494 (Edison)
## 311             40°33 39 N 74°17 34 W / 40.5607°N 74.2927°W / 40.5607; -74.2927 (Woodbridge)
## 312          31°26 28 N 100°27 02 W / 31.4411°N 100.4505°W / 31.4411; -100.4505 (San Angelo)
## 313              42°34 56 N 87°50 44 W / 42.5822°N 87.8456°W / 42.5822; -87.8456 (Kenosha)
## 314          38°21 14 N 121°58 22 W / 38.3539°N 121.9728°W / 38.3539; -121.9728 (Vacaville)
##
## [[6]]
##       Population Number of municipal governments[4]
## 1      1,000,000+                               10
## 2 300,000-999,999                               56
## 3 200,000-299,999                               49
## 4 100,000-199,999                              199
## 5       Total                                  314
##
## [[7]]
##                                      State Number of cities
## 1                                       CA               74
## 2                                       TX               40
## 3                                       FL               22
## 4                                       CO               12
## 5                                       AZ               10
## 6                                       NC                9
## 7                                   IL, WA                8
## 8                           GA, MI, NJ, VA                7
## 9                                   OH, TN                6
## 10          AL, CT, KS, MA, MO, NV, NY, OR                5
## 11                      IN, LA, OK, UT, WI                4
## 12                          IA, MN, PA, SC                3
## 13                          ID, KY, NE, NM                2
## 14 AK, AR, DC, HI, MD, MS, MT, ND, NH, RI, SD             1
## 15                          DE, ME, VT, WV, WY            0
##
## [[8]]
##   Map this section's coordinates using: OpenStreetMap
## 1              Download coordinates as: KML · GPX
##
## [[9]]
##   2019 rank Municipio 2019 estimate 2010 Census  Change 2016 land area
## 1         1  San Juan       318,441     395,326 -19.45%      39.5 sq mi
## 2         2   Bayamón       169,269     208,116 -18.67%      27.0 sq mi
## 3         3  Carolina       146,984     176,762 -16.85%      20.7 sq mi
## 4         4     Ponce       131,881     166,327 -20.71%      30.7 sq mi
## 5         5    Caguas       124,606     142,893 -12.80%      10.9 sq mi
##   2016 land area 2019 population density 2019 population density
## 1      102.3 km2             8,539/sq mi                3,297/km2
## 2       69.9 km2             6,651/sq mi                2,568/km2
## 3       53.6 km2             7,463/sq mi                2,881/km2
## 4       79.5 km2             4,588/sq mi                1,771/km2
## 5       28.2 km2            11,890/sq mi                4,590/km2
##                                                              Location
```

```
## 1 18°24 23 N 66°03 50 W / 18.4064°N 66.0640°W / 18.4064; -66.0640 (San Juan)
## 2   18°22 48 N 66°09 48 W / 18.3801°N 66.1633°W / 18.3801; -66.1633 (Bayamón)
## 3 18°24 43 N 65°58 47 W / 18.4120°N 65.9798°W / 18.4120; -65.9798 (Carolina)
## 4    17°59 15 N 66°36 35 W / 17.9874°N 66.6097°W / 17.9874; -66.6097 (Ponce)
## 5   18°13 56 N 66°02 20 W / 18.2321°N 66.0390°W / 18.2321; -66.0390 (Caguas)
##
## [[10]]
##   Map this section's coordinates using: OpenStreetMap
## 1                 Download coordinates as: KML · GPX
##
## [[11]]
##               City        State 2010 Census 2000 Census    Change
## 1        Paradise      Nevada     223,167     186,070   +19.94%
## 2        Arlington    Virginia     207,627     189,453    +9.59%
## 3   Sunrise Manor      Nevada     189,372     156,120   +21.30%
## 4   Spring Valley      Nevada     178,395     117,390   +51.97%
## 5         Metairie   Louisiana     138,481     146,136    -5.24%
## 6 East Los Angeles California     126,496     124,283    +1.78%
## 7       Enterprise      Nevada     108,481      14,676 +639.17%
## 8          Brandon     Florida     103,483      77,895   +32.85%
##   2010 land area 2010 land area 2010 population density
## 1   46.717 sq mi    120.996 km2              4,777/sq mi
## 2    25.98 sq mi     67.288 km2              7,992/sq mi
## 3   33.352 sq mi     86.381 km2              5,678/sq mi
## 4   33.226 sq mi     86.055 km2              5,369/sq mi
## 5   23.222 sq mi     60.145 km2              5,963/sq mi
## 6    7.448 sq mi     19.290 km2             16,984/sq mi
## 7   46.513 sq mi    120.468 km2              2,332/sq mi
## 8   33.101 sq mi     85.731 km2              3,126/sq mi
##   2010 population density     ANSI
## 1              1,844/km2 2409023
## 2              3,086/km2       NA
## 3              2,192/km2 2410035
## 4              2,073/km2 2408797
## 5              2,302/km2 2403282
## 6              6,558/km2 2408711
## 7                900/km2 2408084
## 8              1,207/km2 2402711
##                                                                        Location
## 1        36°04 51 N 115°08 12 W / 36.08073°N 115.1368°W / 36.08073; -115.1368 (Paradise)
## 2                38°52 48 N 77°10 59 W / 38.880°N 77.183°W / 38.880; -77.183 (Arlington)
## 3     36°10 43 N 115°02 56 W / 36.1785°N 115.0490°W / 36.1785; -115.0490 (Sunrise Manor)
## 4     36°05 55 N 115°15 43 W / 36.0987°N 115.2619°W / 36.0987; -115.2619 (Spring Valley)
## 5            29°59 52 N 90°10 40 W / 29.9978°N 90.1779°W / 29.9978; -90.1779 (Metairie)
## 6 34°01 53 N 118°10 07 W / 34.0315°N 118.1686°W / 34.0315; -118.1686 (East Los Angeles)
## 7        36°01 06 N 115°12 55 W / 36.0182°N 115.2154°W / 36.0182; -115.2154 (Enterprise)
## 8            27°56 10 N 82°17 57 W / 27.9360°N 82.2993°W / 27.9360; -82.2993 (Brandon)
##
## [[12]]
##            City         State 2018 estimated population
## 1        Albany      New York                    97,279
## 2     Allegheny  Pennsylvania                   N/A[af]
## 3      Brooklyn      New York                   N/A[ag]
## 4        Camden    New Jersey                    73,973
```

```
## 5       Canton       Ohio                70,458
## 6      Dearborn    Michigan              94,333
## 7        Duluth    Minnesota             85,884
## 8         Erie  Pennsylvania             96,471
## 9    Fall River Massachusetts            89,661
## 10        Flint     Michigan             95,943
## 11         Gary      Indiana             75,282
## 12      Hammond      Indiana             75,795
## 13      Livonia     Michigan             93,971
## 14         Lynn Massachusetts            94,654
## 15  New Bedford Massachusetts            95,315
## 16 Niagara Falls    New York             48,144
## 17        Parma         Ohio             78,751
## 18    Portsmouth     Virginia            94,632
## 19      Reading  Pennsylvania            88,495
## 20      Roanoke     Virginia             99,920
## 21     Scranton  Pennsylvania            77,182
## 22   Somerville Massachusetts            81,562
## 23    St. Joseph     Missouri            75,959
## 24      Trenton   New Jersey             83,974
## 25        Utica     New York             60,100
## 26   Wilmington     Delaware             70,635
## 27   Youngstown         Ohio             64,958
##    Peak population (year) Numeric decline from peak population
## 1         134,995 (1950)                              -37,716
## 2         129,896 (1900)                                    -
## 3         806,343 (1890)                                    -
## 4         124,555 (1950)                              -50,582
## 5         116,912 (1950)                              -46,454
## 6         112,007 (1960)                              -17,674
## 7         107,312 (1960)                              -21,428
## 8         138,440 (1960)                              -41,969
## 9         120,485 (1920)                              -30,824
## 10        196,940 (1960)                             -100,997
## 11        178,320 (1960)                             -103,038
## 12        111,698 (1960)                              -35,903
## 13        110,109 (1970)                              -16,138
## 14        102,320 (1930)                               -7,666
## 15        121,217 (1920)                              -25,902
## 16        102,394 (1960)                              -54,250
## 17        100,216 (1970)                              -21,465
## 18        114,773 (1960)                              -20,141
## 19        111,171 (1930)                              -22,676
## 20        100,220 (1980)                                 -300
## 21        143,333 (1930)                              -66,151
## 22        103,908 (1930)                              -22,346
## 23        102,979 (1900)                              -27,020
## 24        128,009 (1950)                              -44,035
## 25        101,740 (1930)                              -41,640
## 26        112,504 (1940)                              -41,869
## 27        170,002 (1930)                             -105,044
##    Percent decline from peak population
## 1                              -27.94%
## 2                                    -
```

```
## 3                                         -
## 4                                    -40.61%
## 5                                    -39.73%
## 6                                    -15.78%
## 7                                    -19.97%
## 8                                    -30.32%
## 9                                    -25.58%
## 10                                   -51.28%
## 11                                   -57.78%
## 12                                   -32.14%
## 13                                   -14.66%
## 14                                    -7.49%
## 15                                   -21.37%
## 16                                   -52.98%
## 17                                   -21.42%
## 18                                   -17.55%
## 19                                   -20.40%
## 20                                    -0.30%
## 21                                   -46.15%
## 22                                   -21.51%
## 23                                   -26.24%
## 24                                   -34.40%
## 25                                   -40.93%
## 26                                   -37.22%
## 27                                   -61.79%
##                                        Notes
## 1                  2.30% from 2000 to 2010
## 2           annexed by Pittsburgh in 1907
## 3   consolidated with New York City in 1898
## 4
## 5
## 6                  9.93% from 1990 to 2010
## 7
## 8
## 9
## 10
## 11
## 12
## 13
## 14                 15.11% from 1980 to 2010
## 15                  1.39% from 2000 to 2010
## 16
## 17
## 18
## 19                 12.38% from 1990 to 2010
## 20                  2.23% from 2000 to 2010
## 21                   1.6% from 2010 to 2016
## 22                   7.7% from 2010 to 2018
## 23                  6.86% from 1990 to 2010
## 24
## 25                  2.61% from 2000 to 2010
## 26
## 27
```

```r
tables_data <- html_table(tables, header = FALSE, fill = TRUE)[[5]]

tibble1<-as_tibble(tables_data) %>%
filter(row_number() != 1) %>%
rename("city" = X2, "estimate" = X4, "landarea_mi2"= X7)

tibble2 <- tibble1 %>%
select(city,estimate,landarea_mi2) %>%
mutate(estimate = parse_number(estimate),
landarea_mi2 = parse_number(landarea_mi2),
city = str_replace_all(city, "\\[.\\]", ""))%>%
arrange(desc(landarea_mi2))

####
outliertib<-tibble2 %>%
filter(landarea_mi2>= 715)
outliertib

## # A tibble: 2 x 3
##   city          estimate landarea_mi2
##   <chr>            <dbl>        <dbl>
## 1 Anchorage       291538        1707.
## 2 Jacksonville    903889         747.
####

ggplot(tibble2, mapping=aes(x=landarea_mi2, y=estimate))+
geom_point()+
labs(title="Area of land mi^2 by est pop 2018", x = "Area of land (miles^2)",
y = "Estimated Pop. 2018")+
geom_label_repel(mapping = aes(label = city), color="red",
data = outliertib)
```

Area of land mi^2 by est pop 2018

Jacksonville

Anchorage

Estimated Pop. 2018

Area of land (miles^2)
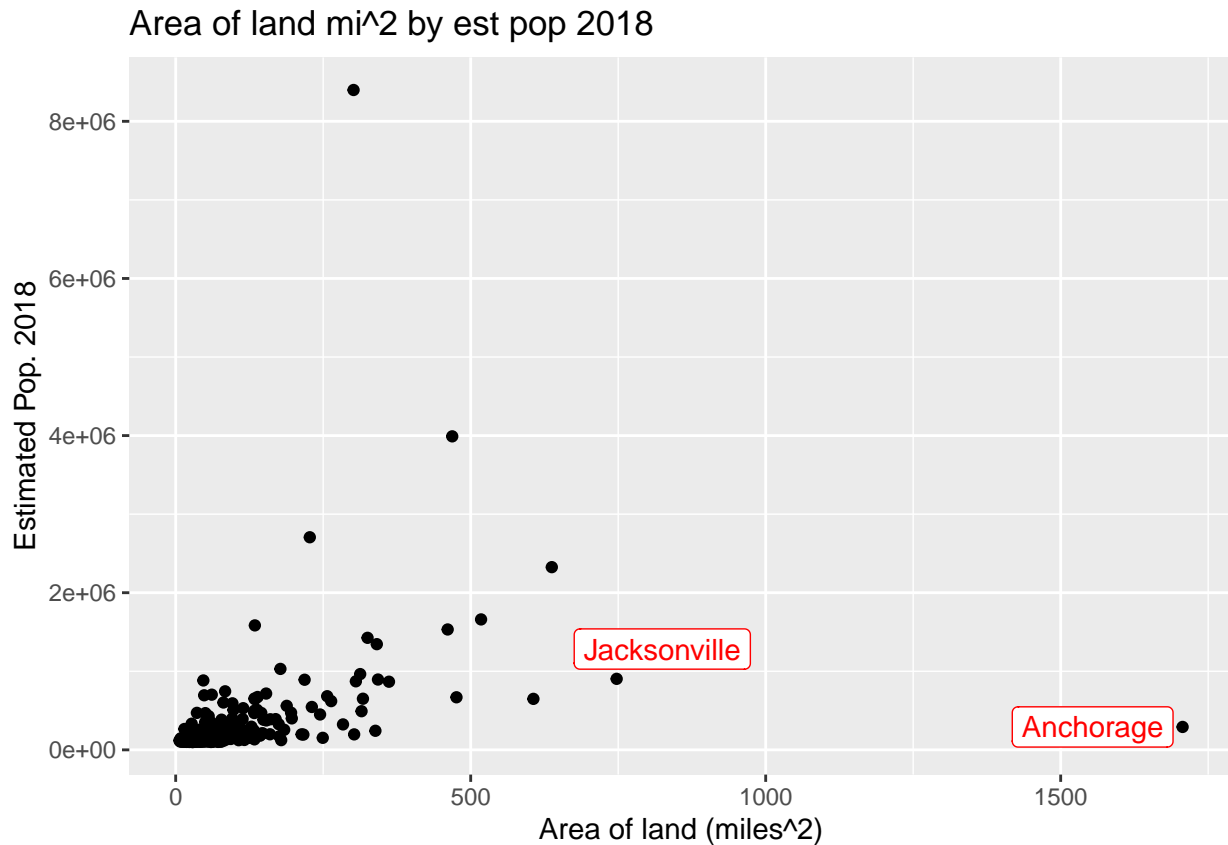
2. Following the examples from class, use the `rvest` package to pull off data from the link https://www.imdb.com/search/title?year=2018-01-01,2018-12-31&sort=boxoffice_gross_us,desc with the top 50 grossing films from 2018. Generate a tibble that contains the title, gross, star rating (imdbscore), and metascore for the top 50 films. Then create a scatterplot of star rating versus Gross and label any outlying films. A couple of hints:

```
#call html
movies <- read_html("https://www.imdb.com/search/title/?year=2018-01-01,2018-12-31&sort=boxoffice_gross

#load in title of movie
title_data_html<-html_nodes(movies, '.lister-item-header a')
title<- html_text(title_data_html)
head(title)
```

```
## [1] "Black Panther"              "Avengers: Infinity War"
## [3] "Incredibles 2"              "Jurassic World: Fallen Kingdom"
## [5] "Aquaman"                    "Deadpool 2"
```

```
#load in gross data of movie
gross_data_html<-html_nodes(movies, '.ghost~ .text-muted+ span')
gross<-html_text(gross_data_html)
gross<-parse_number(gross)

#load in star rating of movie
starrating_data_html<-html_nodes(movies, '.ratings-imdb-rating strong')
starrating<-html_text(starrating_data_html)
starrating<-parse_number(starrating)
```

```r
#load in metascore rating of movie
metascore_data_html<-html_nodes(movies,'.metascore')
metascore<-html_text(metascore_data_html)
metascore<-parse_number(metascore)
```

```r
#combine 4 columns into one tibble
top50<-tibble(title, gross, starrating, metascore)

####
#find outliers
outliertib <- top50 %>%
filter(starrating < 4)
####

#plot results
ggplot(top50, mapping=aes(x=starrating, y=gross))+
geom_point()+
geom_label_repel(mapping = aes(label = title), color="red", data = outliertib, nudge_y = 5)+
labs(title="Gross ($) by Star Rating, Top 50 Movies", y="Gross($)", x= "Star Rating")
```


Gross ($) by Star Rating, Top 50 Movies
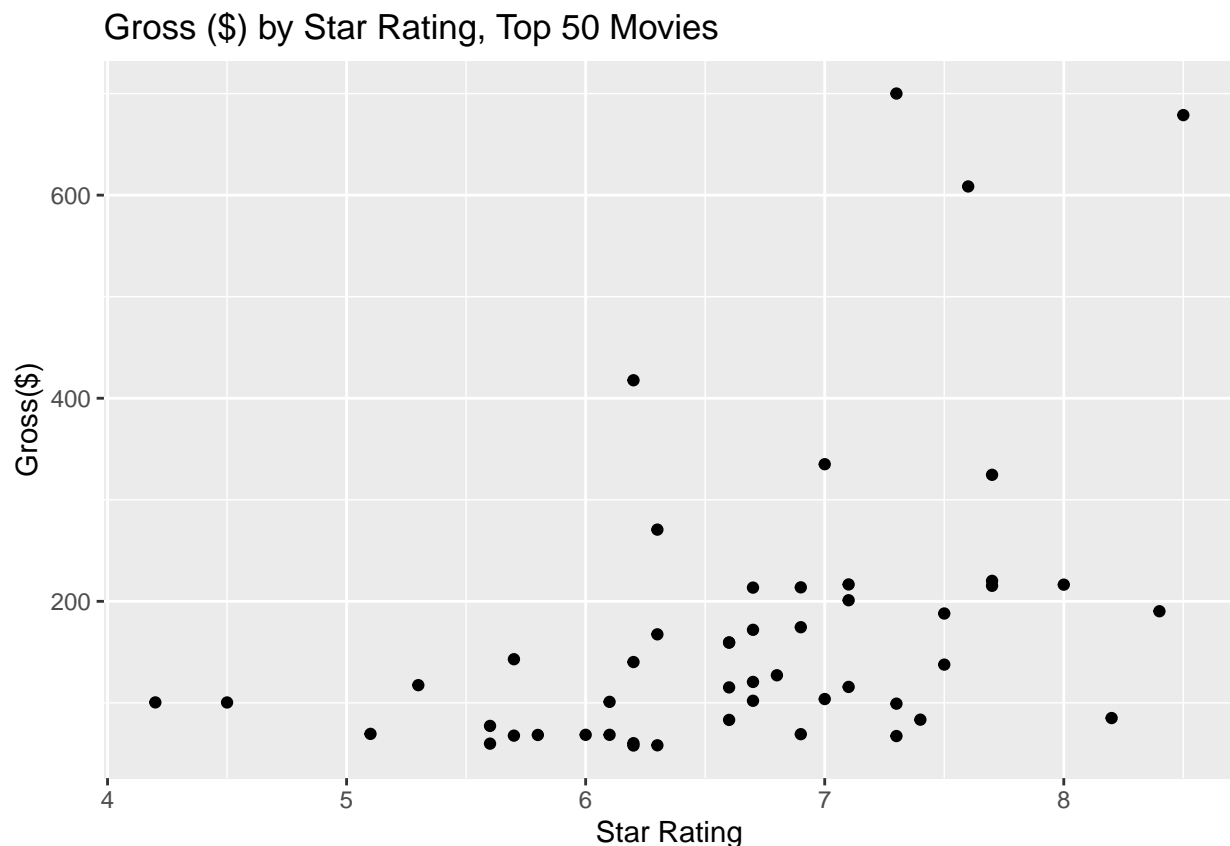
3. Identify which films of the top 50 from 2018 had the biggest discprenacy between reviewers (metascore) and viewers (star rating).

```r
disc <- top50 %>%
  mutate(starrating = starrating * 10) %>% mutate(discrep = abs(metascore - starrating)) %>%
  mutate(discrep = discrep) %>%
arrange(desc(discrep))
```

```
#Top 5 most discrepant movies in top 50
head(disc, n=5)
```

```
## # A tibble: 5 x 5
##   title                 gross starrating metascore discrep
##   <chr>                 <dbl>      <dbl>     <dbl>   <dbl>
## 1 I Can Only Imagine     83.5         74        30      44
## 2 Venom                 214.          67        35      32
## 3 Bohemian Rhapsody     216.          80        49      31
## 4 Avengers: Infinity War 679.         85        68      17
## 5 The Equalizer 2       102.          67        50      17
```

#Top 5 most discrepant movies in top 50 #head(disc, n=5)

title gross starrating metascore discrep

#1 I Can Only Imagine 83.5 74 30 44

#2 Venom 214. 67 35 32

#3 Bohemian Rhapsody 216. 80 49 31

#4 Avengers: Infinity War 679. 85 68 17

#5 The Equalizer 2 102. 67 50 17

4. 5 points if you push your Rmd file with HW14 solutions along with the knitted pdf file to your MSCS264-HW14 repository in your GitHub account. So that I can check, make your repository private (good practice when doing HW), but add me (username = slanegetaz) as a collaborator under Settings > Collaborators.

#I added my solutions and you to my private repository: my username is PaulMartinuzzi.

Factors

*5. In the `nycflights13` data, just consider flights to O'Hare (dest=="ORD"), and summarize the mean arrival delay by carrier. Use the entire name of the carrier after merging carrier names into `flights`. Then use `geom_point` to plot mean arrival delay vs. carrier – first without reordering carrier names, and second after reordering carrier names by mean arrival delay.

```
library(nycflights13)
flights <- flights
airlines <- airlines

flights1 <- flights %>% filter(dest=="ORD", is.na(arr_delay)==FALSE) %>% group_by(carrier)%>% summarise

lefty <- left_join(flights1, airlines, by = c("carrier", "carrier"))

ggplot(lefty, aes(x=carrier, y=meanarrdel))+
  geom_point()+
  labs(title="NOT reordered by carrier mean arrival del")
```
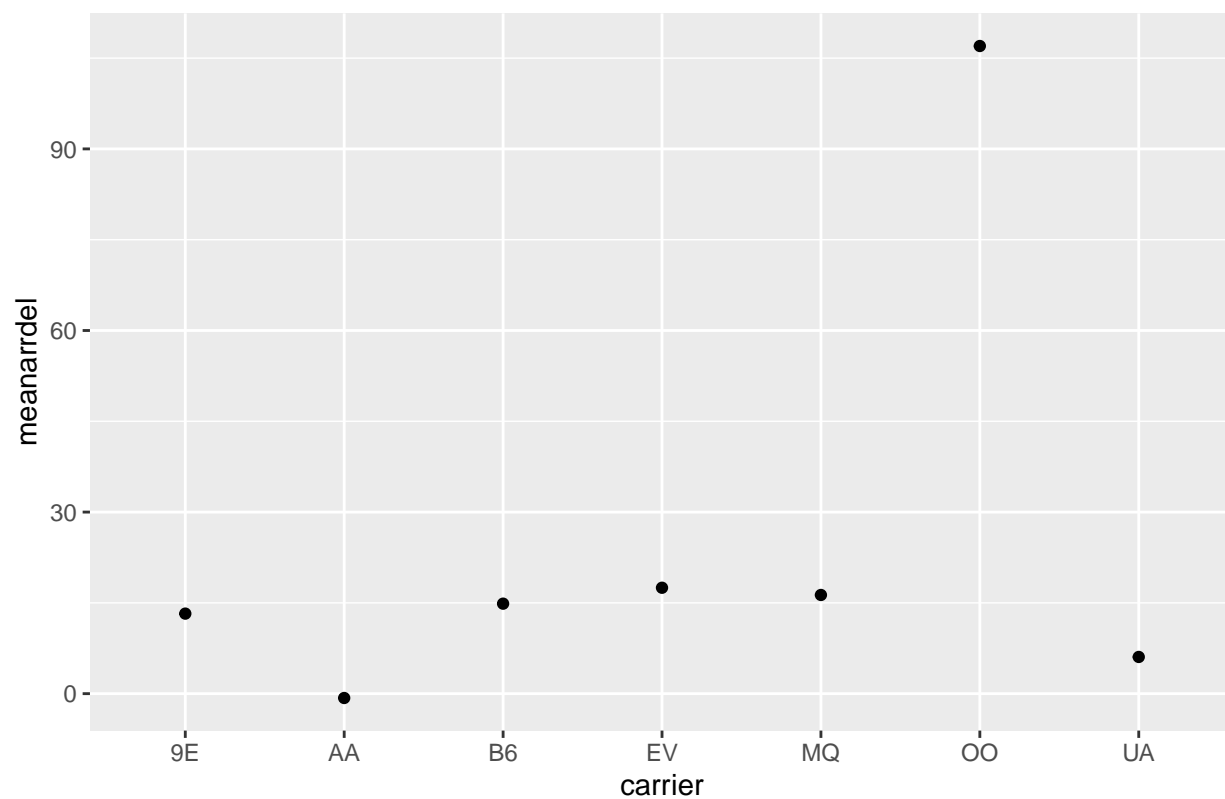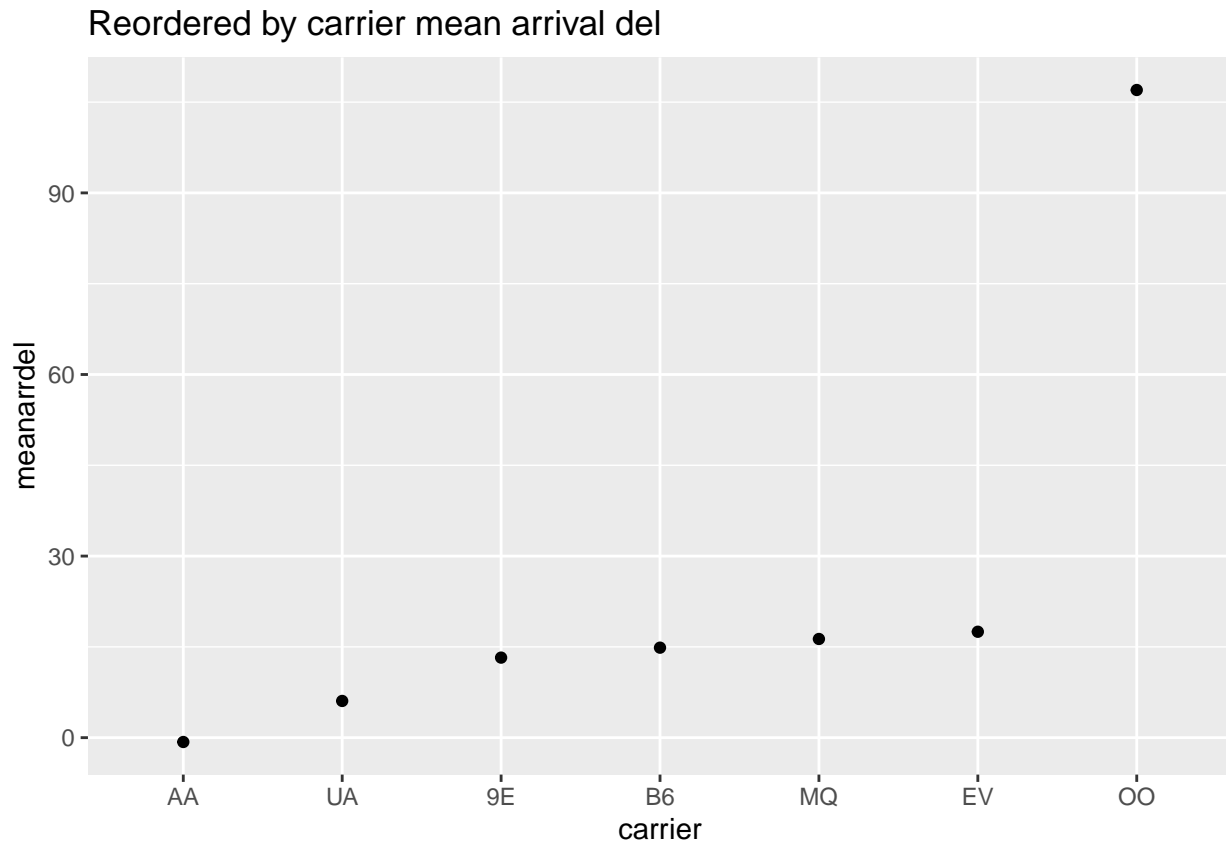
NOT reordered by carrier mean arrival del


```r
lefty2 <- lefty%>%
  mutate(carrier = fct_reorder(carrier, meanarrdel))

ggplot(lefty2, aes(x=carrier, y=meanarrdel))+
  geom_point()+
  labs(title="Reordered by carrier mean arrival del")
```

Reordered by carrier mean arrival del

*6. Again considering only flights to O'Hare, use `fct_collapse()` create a new factor variable which differentiates national carriers (American and United) from regional carriers (all other which fly to O'Hare). Then create a density plot comparing arrival delays for all flights to O'Hare from those two groups (you might want to exclude arrival delays over a certain level).

```r
flightsfin <- flights %>% filter(dest=="ORD")
```

```r
flightstype <- flightsfin %>%
  mutate(carriertype = fct_collapse(carrier,
                                    National = c("UA", "AA"),
                                    Regional = c("MQ", "B6", "9E", "OO", "EV")))
```

```r
ggplot(flightstype, aes(x=arr_delay)) + geom_density()+
  facet_wrap(~carriertype)+
  xlim(0,300)+
  ggtitle("Arrival delay to ohare by carrier type")
```

```
## Warning: Removed 10902 rows containing non-finite values (stat_density).
```

Arrival delay to ohare by carrier type