In [1]:
```
import csv

f = open("guns.csv")
csvreader = csv.reader(f)
data = list(csvreader)
print(data[:5])
```

```
[['', 'year', 'month', 'intent', 'police', 'sex', 'age', 'race', 'his
panic', 'place', 'education'], ['1', '2012', '01', 'Suicide', '0',
'M', '34', 'Asian/Pacific Islander', '100', 'Home', '4'], ['2', '201
2', '01', 'Suicide', '0', 'F', '21', 'White', '100', 'Street', '3'],
['3', '2012', '01', 'Suicide', '0', 'M', '60', 'White', '100', 'Other
specified', '4'], ['4', '2012', '02', 'Suicide', '0', 'M', '64', 'Whi
te', '100', 'Home', '4']]
```

In [2]:
```
headers = data[0]
data = data[1:len(data)]
print(headers)
print(data[:5])
```

```
['', 'year', 'month', 'intent', 'police', 'sex', 'age', 'race', 'hisp
anic', 'place', 'education']
[['1', '2012', '01', 'Suicide', '0', 'M', '34', 'Asian/Pacific Island
er', '100', 'Home', '4'], ['2', '2012', '01', 'Suicide', '0', 'F', '2
1', 'White', '100', 'Street', '3'], ['3', '2012', '01', 'Suicide',
'0', 'M', '60', 'White', '100', 'Other specified', '4'], ['4', '201
2', '02', 'Suicide', '0', 'M', '64', 'White', '100', 'Home', '4'],
['5', '2012', '02', 'Suicide', '0', 'M', '31', 'White', '100', 'Other
specified', '2']]
```

In [4]:
```
years = [row[1] for row in data]
year_counts = {}
for year in years:
    if year in year_counts:
        year_counts[year] += 1
    else:
        year_counts[year] = 1
year_counts
```

Out[4]:
```
{'2012': 33563, '2013': 33636, '2014': 33599}
```

In [7]:
```
import datetime

dates = [datetime.datetime(year=int(row[1]), month=int(row[2]), day=1
) for row in data]
print(dates[:5])

date_counts = {}
for date in dates:
    if date in date_counts:
        date_counts[date] += 1
    else:
        date_counts[date] = 1
date_counts
```

```
[datetime.datetime(2012, 1, 1, 0, 0), datetime.datetime(2012, 1, 1,
0, 0), datetime.datetime(2012, 1, 1, 0, 0), datetime.datetime(2012,
2, 1, 0, 0), datetime.datetime(2012, 2, 1, 0, 0)]
```

Out[7]:
```
{datetime.datetime(2012, 1, 1, 0, 0): 2758,
 datetime.datetime(2012, 2, 1, 0, 0): 2357,
 datetime.datetime(2012, 3, 1, 0, 0): 2743,
 datetime.datetime(2012, 4, 1, 0, 0): 2795,
 datetime.datetime(2012, 5, 1, 0, 0): 2999,
 datetime.datetime(2012, 6, 1, 0, 0): 2826,
 datetime.datetime(2012, 7, 1, 0, 0): 3026,
 datetime.datetime(2012, 8, 1, 0, 0): 2954,
 datetime.datetime(2012, 9, 1, 0, 0): 2852,
 datetime.datetime(2012, 10, 1, 0, 0): 2733,
 datetime.datetime(2012, 11, 1, 0, 0): 2729,
 datetime.datetime(2012, 12, 1, 0, 0): 2791,
 datetime.datetime(2013, 1, 1, 0, 0): 2864,
 datetime.datetime(2013, 2, 1, 0, 0): 2375,
 datetime.datetime(2013, 3, 1, 0, 0): 2862,
 datetime.datetime(2013, 4, 1, 0, 0): 2798,
 datetime.datetime(2013, 5, 1, 0, 0): 2806,
 datetime.datetime(2013, 6, 1, 0, 0): 2920,
 datetime.datetime(2013, 7, 1, 0, 0): 3079,
 datetime.datetime(2013, 8, 1, 0, 0): 2859,
 datetime.datetime(2013, 9, 1, 0, 0): 2742,
 datetime.datetime(2013, 10, 1, 0, 0): 2808,
 datetime.datetime(2013, 11, 1, 0, 0): 2758,
 datetime.datetime(2013, 12, 1, 0, 0): 2765,
 datetime.datetime(2014, 1, 1, 0, 0): 2651,
 datetime.datetime(2014, 2, 1, 0, 0): 2361,
 datetime.datetime(2014, 3, 1, 0, 0): 2684,
 datetime.datetime(2014, 4, 1, 0, 0): 2862,
 datetime.datetime(2014, 5, 1, 0, 0): 2864,
 datetime.datetime(2014, 6, 1, 0, 0): 2931,
 datetime.datetime(2014, 7, 1, 0, 0): 2884,
 datetime.datetime(2014, 8, 1, 0, 0): 2970,
 datetime.datetime(2014, 9, 1, 0, 0): 2914,
 datetime.datetime(2014, 10, 1, 0, 0): 2865,
 datetime.datetime(2014, 11, 1, 0, 0): 2756,
 datetime.datetime(2014, 12, 1, 0, 0): 2857}
```

In [9]:
```
sexes = [row[5] for row in data]
sex_counts = {}
for sex in sexes:
    if sex in sex_counts:
        sex_counts[sex] += 1
    else:
        sex_counts[sex] = 1
sex_counts
```

Out[9]:
```
{'F': 14449, 'M': 86349}
```

In [10]:
```
races = [row[7] for row in data]
race_counts = {}

for race in races:
    if race in race_counts:
        race_counts[race] += 1
    else:
        race_counts[race] = 1
race_counts
```

Out[10]:
```
{'Asian/Pacific Islander': 1326,
 'Black': 23296,
 'Hispanic': 9022,
 'Native American/Native Alaskan': 917,
 'White': 66237}
```

In [13]:
```
import csv

f_2 = open("census.csv")
csvreader_2 = csv.reader(f_2)
census = list(csvreader_2)
census
```

Out[13]:
```
[['Id',
  'Year',
  'Id',
  'Sex',
  'Id',
  'Hispanic Origin',
  'Id',
  'Id2',
  'Geography',
  'Total',
  'Race Alone - White',
  'Race Alone - Hispanic',
  'Race Alone - Black or African American',
  'Race Alone - American Indian and Alaska Native',
  'Race Alone - Asian',
  'Race Alone - Native Hawaiian and Other Pacific Islander',
  'Two or More Races'],
 ['cen42010',
  'April 1, 2010 Census',
  'totsex',
  'Both Sexes',
  'tothisp',
  'Total',
  '0100000US',
  '',
  'United States',
  '308745538',
  '197318956',
  '44618105',
  '40250635',
  '3739506',
  '15159516',
  '674625',
  '6984195']]
```

In [14]:
```
mapping = {
    "Asian/Pacific Islander": 15159516 + 674625,
    "Native American/Native Alaskan": 3739506,
    "Black": 40250635,
    "Hispanic": 44618105,
    "White": 197318956
}

race_per_hundredk = {}
for key, value in race_counts.items():
    race_per_hundredk[key] = (value / mapping[key]) * 10000

print(race_per_hundredk)
```

```
{'Asian/Pacific Islander': 0.8374309664161763, 'White': 3.35684930341
9181, 'Black': 5.78773477735196, 'Hispanic': 2.022049121091091, 'Nati
ve American/Native Alaskan': 2.452195557381109}
```

In [19]:
```
intents = [row[3] for row in data]
homicide_race_counts = {}
for i,race in enumerate(races):
    if race not in homicide_race_counts:
        homicide_race_counts[race] = 0
    if intents[i] == "Homicide":
        homicide_race_counts[race] += 1

race_per_hundredk = {}
for k,v in homicide_race_counts.items():
    race_per_hundredk[k] = (v / mapping[k]) * 100000

race_per_hundredk
```

Out[19]:
```
{'Asian/Pacific Islander': 3.530346230970155,
 'Black': 48.471284987180944,
 'Hispanic': 12.627161104219914,
 'Native American/Native Alaskan': 8.717729026240365,
 'White': 4.6356417981453335}
```