In [1]:
```
import numpy as np
from scipy import stats
import statistics
```

In [2]:
```
data = np.array([34,
                 35,
                 45,
                 40,
                 46,
                 38,
                 47,
                 36,
                 38,
                 34,
                 33,
                 36,
                 43,
                 43,
                 37,
                 38,
                 32,
                 38,
                 40,
                 33,
                 38,
                 40,
                 48,
                 39,
                 32,
                 36,
                 40,
                 40,
                 36,
                 34])
```

In [3]:
```
mode = statistics.multimode(data)
mode
```

Out[3]:
```
[40, 38]
```

In [4]:
```
median = np.median(data)
print(f"Median: {median}")
```

```
Median: 38.0
```

In [5]:
```
mean = np.mean(data)
mean
```

Out[5]:
```
38.3
```

In [6]:
```
un_std = stats.tstd(data)
un_std
```

Out[6]:
```
4.387678673049228
```

In [7]:
```
std_mean = un_std/np.sqrt(len(data))
std_mean
```

Out[7]:
```
0.8010768614377989
```

In [8]:
```
# ans for 13
n = (un_std/(0.01*mean))**2
n
```

Out[8]:
```
131.24177094349974
```