In [3]:
```
from scipy.stats import norm
import scipy.stats as stats
```

A. Specify a Rupee range (centered on the mean) such that it contains 95% probability for the annual profit of the company.

In [5]:
```
norm.ppf(0.025,45*5,3)
```

Out[5]: 219.12010804637984

In [6]:
```
norm.ppf(0.975,45*5,3)
```

Out[6]: 230.87989195362016

In [7]:
```
norm.ppf(0.025,45*7,3)
```

Out[7]: 309.1201080463798

In [8]:
```
norm.ppf(0.975,45*7,3)
```

Out[8]: 320.8798919536202

In [31]:
```
219.12+309.12
```

Out[31]: 528.24

In [33]:
```
230.87+320.87
```

Out[33]: 551.74

The Rupee Range will be [219.12, 230.87] + [309.12, 320.87] = [528.24,551.74]

B. Specify the 5th percentile of profit (in Rupees) for the company

In [34]:
```
norm.ppf(0.05,45*7,3)
```

Out[34]: 310.0654391191456

In [36]:
```
norm.ppf(0.05,45*5,3)
```

Out[36]: 220.0654391191456

In [37]:
```
310.0654+ 220.0654
```

Out[37]:
```
530.1308
```

5th percentile of profit (in Rupees) = 310.0654+ 220.0654 = 530.1308

In [ ]:
```

```