In [1]:
```
from scipy.stats import norm
```

In [2]:
```
1-norm.cdf((1850-1800)/(100/np.sqrt(50)))
```

Out[2]: 0.00020347600872250293

In [3]:
```
1-norm.cdf(x=1850,loc=1800,scale=(100/np.sqrt(50)))
```

Out[3]: 0.00020347600872250293

In [4]:
```
1-norm.cdf(x=1900,loc=1800,scale=(100/np.sqrt(5)))
```

Out[4]: 0.0126736593387341

In [5]:
```
norm.ppf(0.95)
```

Out[5]: 1.6448536269514722

In [6]:
```
1800 + (norm.ppf(0.95)*(100/np.sqrt(50)))
```

Out[6]: 1823.2617430735336

In [7]:
```
norm.ppf(0.99)
```

Out[7]: 2.3263478740408408

In [8]:
```
1800 + (norm.ppf(0.99)*(100/np.sqrt(50)))
```

Out[8]: 1832.8995271426638

In [9]:
```
1800 + (norm.ppf(0.95)*(100/np.sqrt(5)))
```

Out[9]: 1873.5600904580115

In [10]:
```
1800 + (norm.ppf(0.99)*(100/np.sqrt(5)))
```

Out[10]: 1904.0374397133487

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