

Q5. In January 2005, a company that monitors Internet traffic (WebSideStory) reported that its sampling revealed that the Mozilla Firefox browser launched in 2004 had grabbed a 4.6% share of the market.

I.If the sample were based on 2,000 users, could Microsoft conclude that Mozilla has a less than 5% share of the market?

II.WebSideStory claims that its sample includes all the daily Internet users. If that's the case, then can Microsoft conclude that Mozilla has a less than 5% share of the market?

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In [1]: import pandas as pd
import numpy as np
import seaborn as sns
from scipy import stats
from scipy.stats import norm
```

```
In [2]: # Apply One-Sample One-Tail z-test
z_scores=(0.046-0.05)/(np.sqrt((0.05*(1-0.05))/2000))
z_scores
```

```
Out[2]: -0.820782681668124
```

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In [3]: # Find Probability assuming null hypothesis, so as to compare with Type-1 error  $\alpha = 0.05$ 
p_value=1-stats.norm.cdf(abs(z_scores))
p_value
```

```
Out[3]: 0.20588503245107104
```