

T test

Name - Gayatri Bhakare
Roll No - 10
Class - 3rd year
Section - CSE

```
In [1]: ages=[10,20,35,50,28,40,55,18,16,55,30,25,43,18,30,28,14,24,16,17,32,35,26,
```

```
In [2]: len(ages)
```

```
Out[2]: 32
```

```
In [3]: import numpy as np
```

```
In [4]: ages_mean = np.mean(ages)  
print(ages_mean)
```

```
30.34375
```

Lets take sample

```
In [19]: sample_size = 10  
age_sample = np.random.choice(ages, 10)
```

```
In [20]: age_sample
```

```
Out[20]: array([40, 35, 18, 70, 28, 27, 14, 18, 20, 28])
```

```
In [21]: from scipy.stats import ttest_1samp
```

```
In [22]: ttest, p_value = ttest_1samp(age_sample, 30)
```

```
In [23]: print(p_value)
```

```
0.9698607885797226
```

```
In [24]: if p_value < 0.05: #alpha value is 0.05 or 5%  
    print(" we are rejecting null hypothesis")  
else:  
    print("we are accepting null hypothesis")
```

```
we are accepting null hypothesis
```

END