MacBook problem of probability

```
import numpy as np
import pandas as·pd
```

```
import seaborn as sb
from scipy.stats import binom

x=np.arange(0,26)
n=25
p=0.1
```

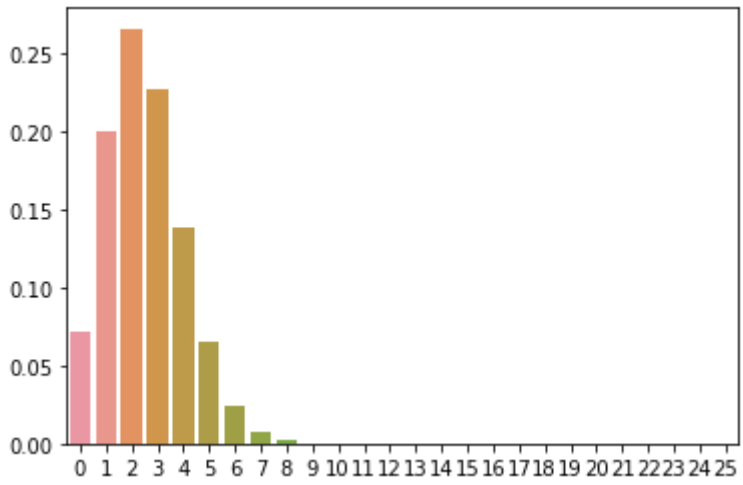
```
dist=binom(n,p)
dist
```

```
<scipy.stats._distn_infrastructure.rv_frozen at 0x7f8fcec46ad0>
```

```
dist.pmf(x)
```

```
array([7.17897988e-02, 1.99416108e-01, 2.65888144e-01, 2.26497308e-01,
       1.38415021e-01, 6.45936766e-02, 2.39235839e-02, 7.21504912e-03,
       1.80376228e-03, 3.78567392e-04, 6.73008697e-05, 1.01971015e-05,
       1.32184649e-06, 1.46871832e-07, 1.39877935e-08, 1.13974614e-09,
       7.91490374e-11, 4.65582573e-12, 2.29917320e-13, 9.41182011e-15,
       3.13727337e-16, 8.29966500e-18, 1.67670000e-19, 2.43000000e-21,
       2.25000000e-23, 1.00000000e-25])
```

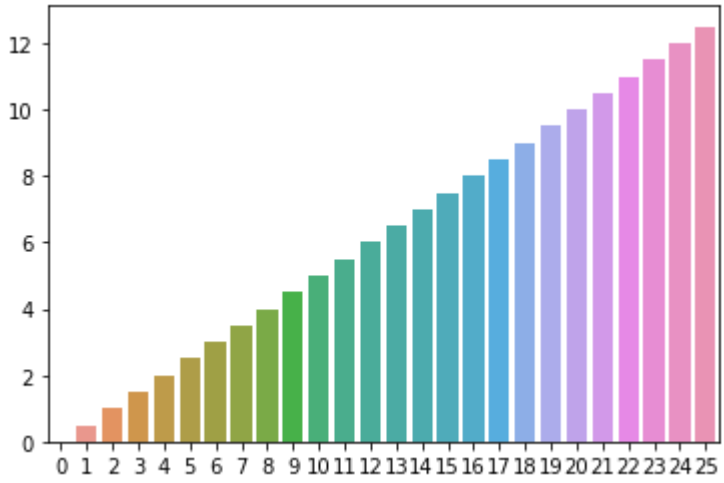
```
ax=sb.barplot(x=x,y=dist.pmf(x))
```



10% of 25 , 2.5 , , after 2.5 decreases

for sample bar plot

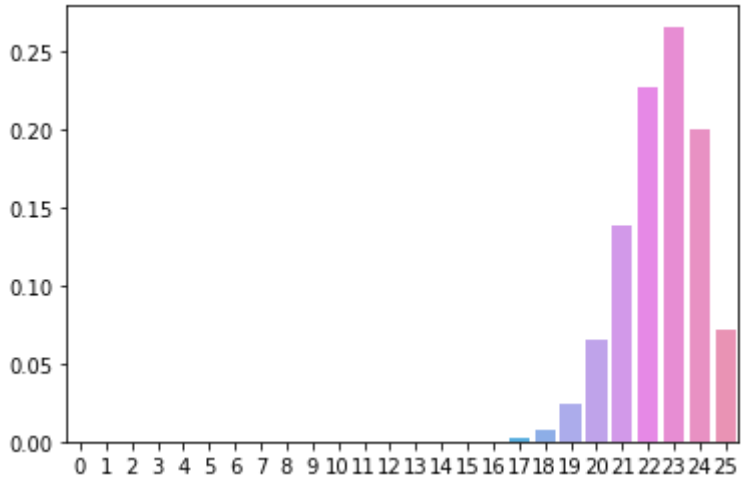
```
ax=sb.barplot(x=x,y=0.5*x)
```



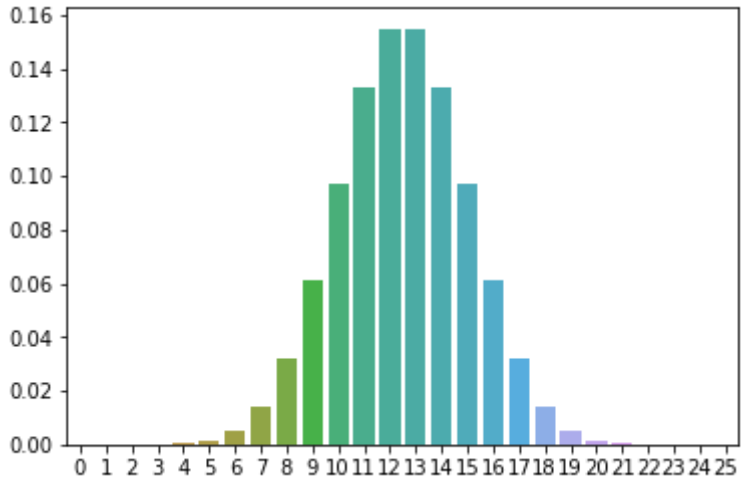

```
#PROB OF EXACTLY 3 HAVING MACBOOK
#

```

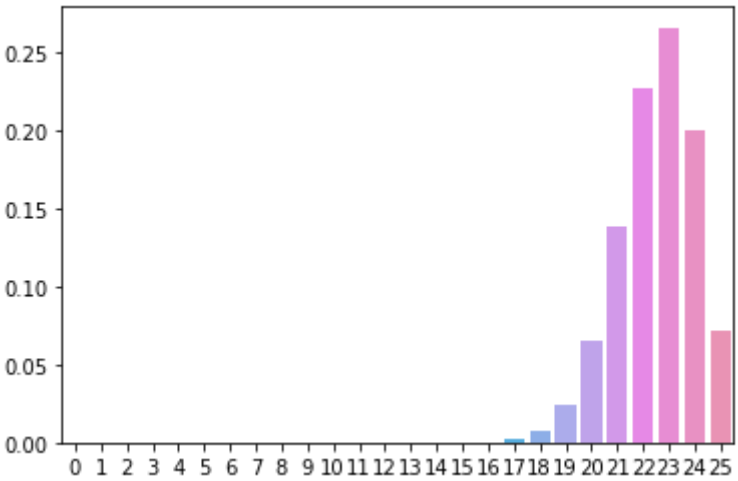
```
dist=binom(n,0.9)
ax=sb.barplot(x=x,y=dist.pmf(x))
```




```
dist=binom(n,0.5)
ax=sb.barplot(x=x,y=dist.pmf(x))
```



```
dist=binom(n,0.9)
ax=sb.barplot(x=x,y=dist.pmf(x))
```



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