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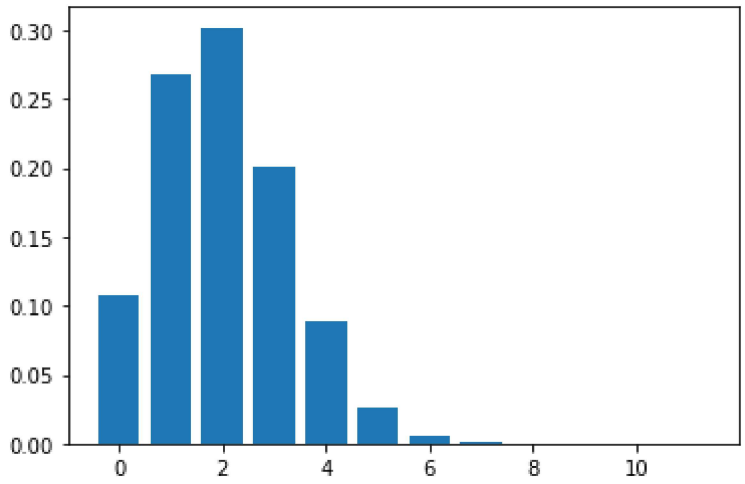
20104016

IMPORT LIBRARIES

In [1]:
```
import numpy as np
import pandas as pd
from scipy.stats import binom
import matplotlib.pyplot as plt
```

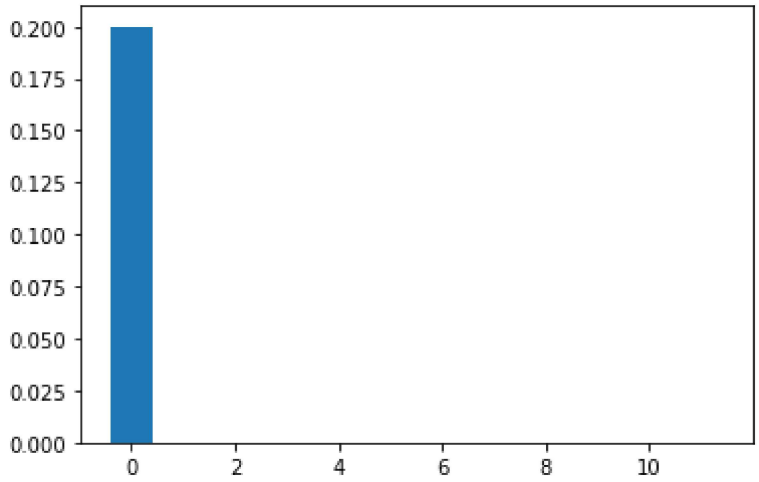
BINOMIAL

In [5]:
```
n=10
p=0.2
r_values=list(range(n+2))
dist=[binom.pmf(r,n,p) for r in r_values]
plt.bar(r_values,dist)
plt.show()
```



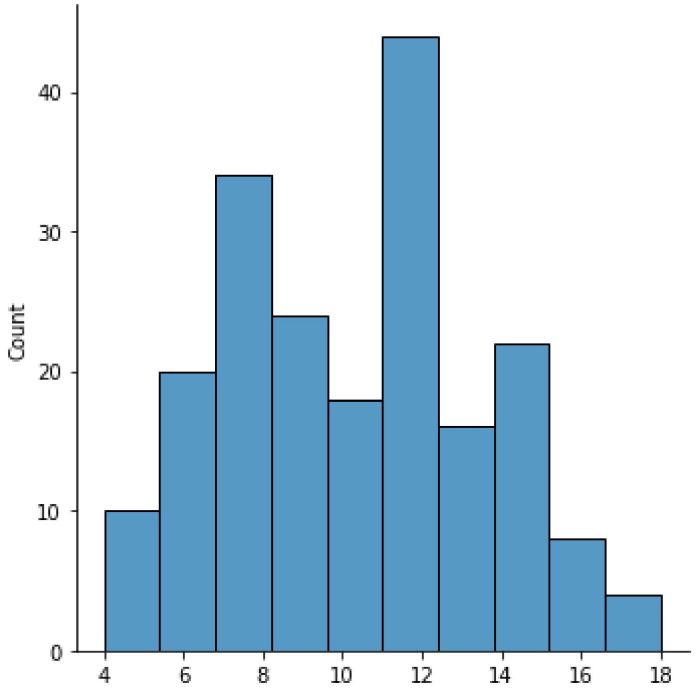
BERNOULLI DISTRIBUTION

In [9]:
```
from scipy.stats import bernoulli
bd=bernoulli(0.8)
x=[0,11]
plt.bar(x,bd.pmf(x))
plt.show()
```



POISSON DISTRIBUTION

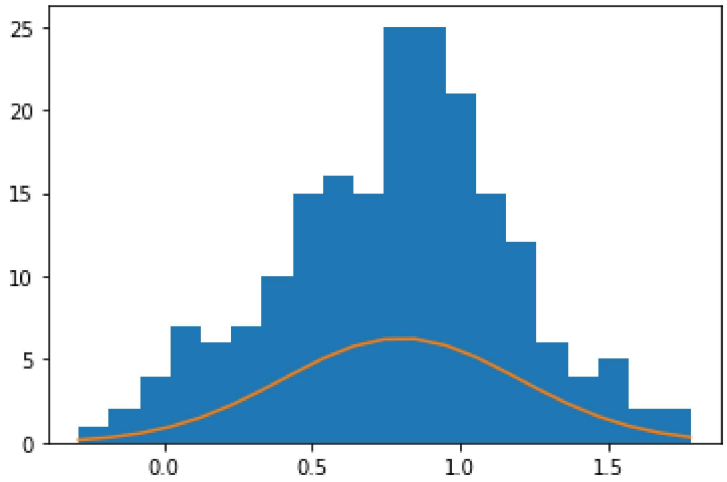
In [10]:
```
from numpy import random
import matplotlib.pyplot as plt
import seaborn as sns
sns.displot(random.poisson(lam=10,size=200))
plt.show()
```



NORMAL

In [11]:
```
import matplotlib.pyplot as plt
mu,sigma=0.8,0.4
s=np.random.normal(mu,sigma,200)
count,bins,ignored=plt.hist(s,20)
plt.plot(bins,1/sigma*np.sqrt(2*np.pi)*np.exp(-(bins-mu)**2/(2*sigma**2)))

plt.show()
```



EXPONENTIAL

In [12]:
```
import matplotlib.pyplot as plt
exp=np.random.exponential(20,200)
count,bins,ignored=plt.hist(exp,8)
plt.show()
```