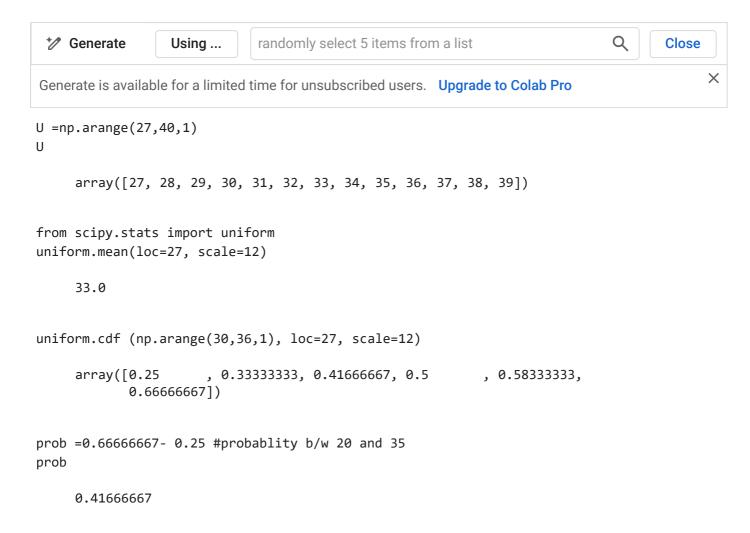
Possion Distribution

0.9722107407936565

```
poisson.pmf(10,6.4)
0.052790043854115495
```

Uniform Distribution



According to the National Association of Insurance Commissioners, the average annual cost for automobile insurance in the United States in a recent year was

- $691. Suppose automobile in surance costs are uniformly distributed in the United State 200 \ to$
- 1,182. What is the standard deviation of this uniform distribution? What is the height? What is the probability that a person's annual cost for automobile in surance in the Unitation of the probability that a person's annual cost for automobile in surance in the Unitation of this uniform distribution? What is the height of the probability that a person's annual cost for automobile in surance in the Unitation of this uniform distribution? What is the height of the probability that a person's annual cost for automobile in surance in the Unitation of Unitation of Unitation of Unitation of Unitation of Unitation

```
uniform.mean(loc=200, scale=982)
691.0
uniform.std(loc=200, scale=982)
```

283.4789821721062

Normal Distribution

```
from scipy.stats import norm
val, m,s =68, 65.5, 2.5
print (norm.cdf(val,m,s))
     0.8413447460685429
if cdf(x>val)
Double-click (or enter) to edit
print (1-norm.cdf(val,m,s))
     0.15865525393145707
cdf(val1 < x Val2)
print (norm.cdf(val,m,s) - norm.cdf(63,m,s))
     0.6826894921370859
p(x>700 \text{ m}=494 \text{ and } s=100) =?
print (1-norm.cdf(700,494,100))
     0.019699270409376912
print (norm.cdf(550,494,100))
     0.712260281150973
print (norm.cdf(600,494,100) - norm.cdf(300,494,100))
     0.8292378553956377
print (norm.cdf(450,494,100) - norm.cdf(350,494,100))
     0.2550348541262666
```

norm.ppf(0.95) #areq under .95 coreesponding Z value is

1.6448536269514722

norm.ppf(1-.6772) #left hand side

-0.45988328292440145

Hypergeometric Distribution



Suppose 18 major computer companies operate i are located in California's Silicon Valley. I selected randomly from the entire list, what more of the selected companies are located in

Suppose 18 major computer companies operate in the United States and that 12 are located in California's Silicon Valley. If three computer companies are selected randomly from the entire list, what is the probability that one or more of the selected companies are located in the Silicon Valley?