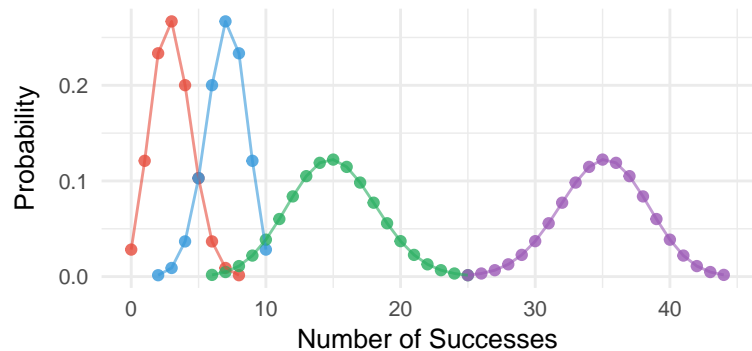


# Common Probability Distributions in Business Analytics

## Binomial Distribution

Number of successes in fixed trials

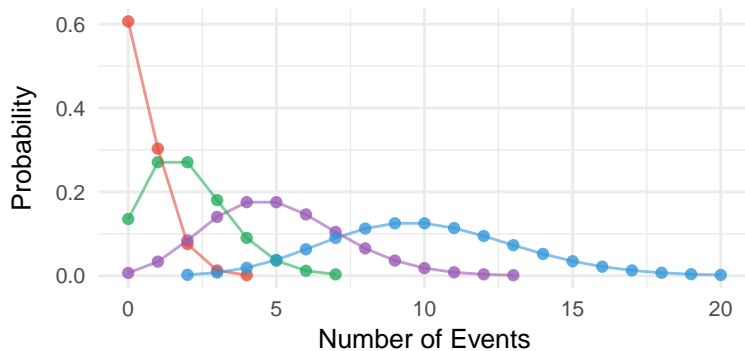


Parameters

- n=10, p=0.3
- n=10, p=0.7
- n=50, p=0.3
- n=50, p=0.7

## Poisson Distribution

Number of events in fixed interval

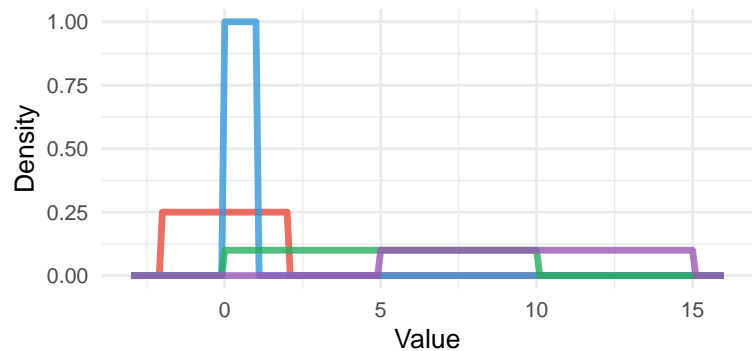


Parameters

- $\lambda = 0.5$
- $\lambda = 10$
- $\lambda = 2$
- $\lambda = 5$

## Uniform Distribution

Equal probability across specified range

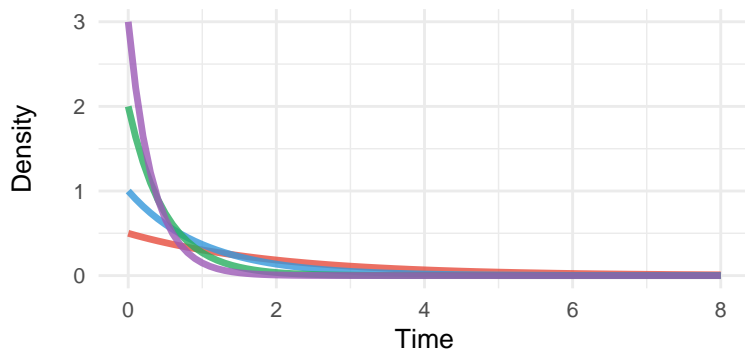


Parameters

- U(-2,2)
- U(0,1)
- U(0,10)
- U(5,15)

## Exponential Distribution

Time between events in Poisson process

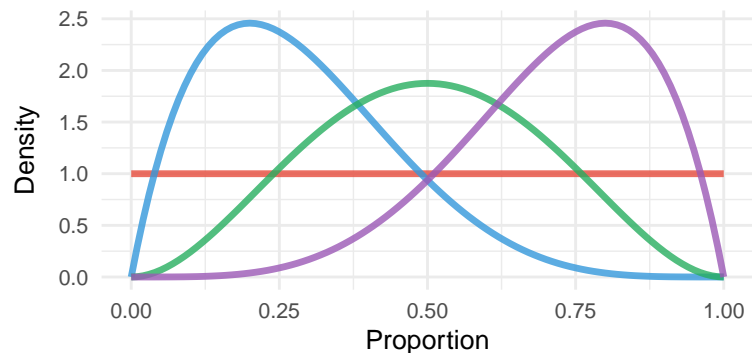


Parameters

- $\lambda = 0.5$
- $\lambda = 1$
- $\lambda = 2$
- $\lambda = 3$

## Beta Distribution

Modeling proportions and percentages

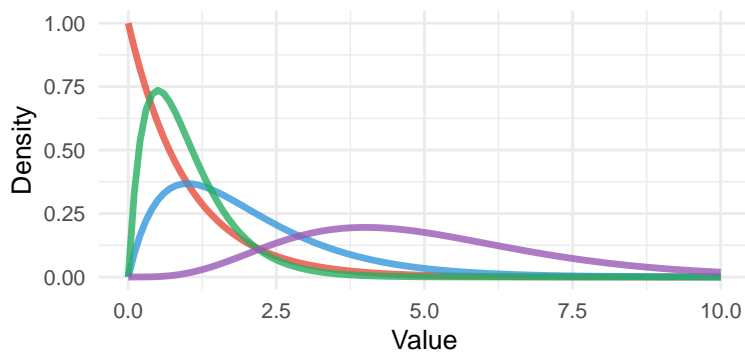


Parameters

- $\alpha=1, \beta=1$
- $\alpha=2, \beta=5$
- $\alpha=3, \beta=3$
- $\alpha=5, \beta=2$

## Gamma Distribution

Sum of exponential random variables



Parameters

- $\alpha=1, \beta=1$
- $\alpha=2, \beta=1$
- $\alpha=2, \beta=2$
- $\alpha=5, \beta=1$