Distribuição Poisson e Normal

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2022-10-25

Contents

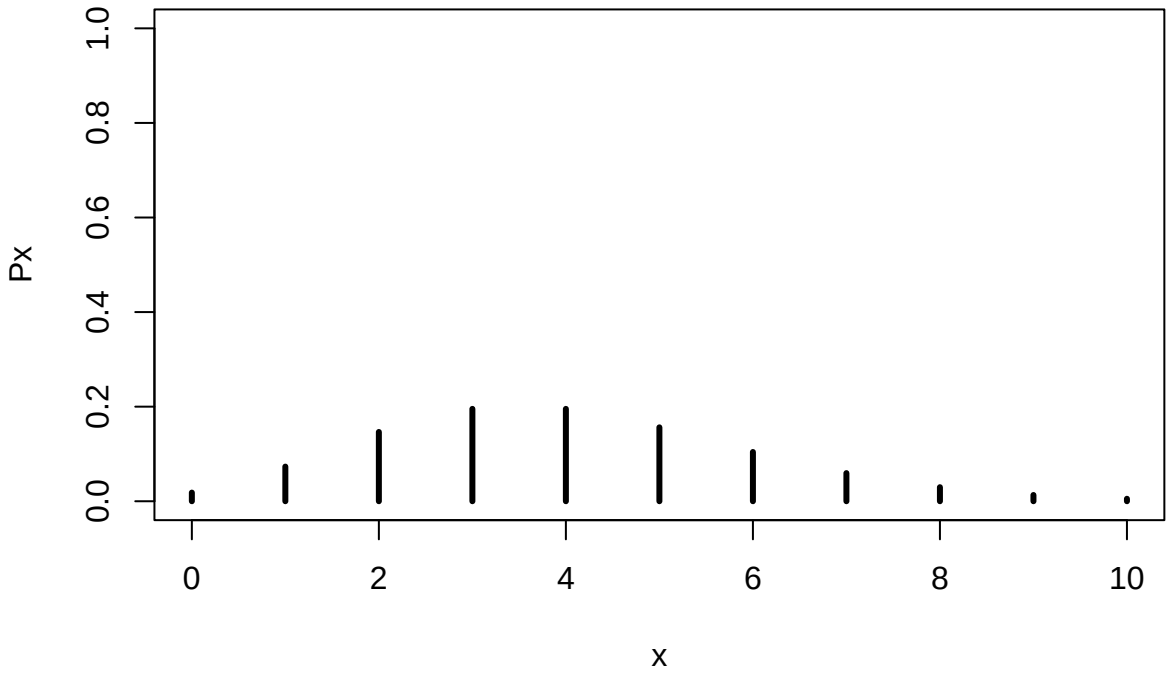
1 Distribuião Poisson

```
x<- 0:10
Px<- dpois(x, lambda = 4)

dados<- data.frame(x, Px)
round(dados,2)
```

```
##     x   Px
## 1   0 0.02
## 2   1 0.07
## 3   2 0.15
## 4   3 0.20
## 5   4 0.20
## 6   5 0.16
## 7   6 0.10
## 8   7 0.06
## 9   8 0.03
## 10  9 0.01
## 11 10 0.01
```

```
with(dados,
     plot(x, Px, type="h", ylim=c(0,1), lwd=3)
)
```




```
# exemplo 64
dpois(x=6, lambda = 4)
```

```
## [1] 0.1041956
```

```
# exemplo 65
1-sum(dpois(x=0:2, lambda=1))
```

```
## [1] 0.0803014
```

```
ppois(2, lambda = 1, lower.tail = FALSE)
```

```
## [1] 0.0803014
```

```
# exemplo 66
#1
dpois(0,5)
```

```
## [1] 0.006737947
```

```
#2
dpois(2, 10)
```

```
## [1] 0.002269996
```

```
dbinom(3, 10^6, 1e-06)
```

```
## [1] 0.06131321
```

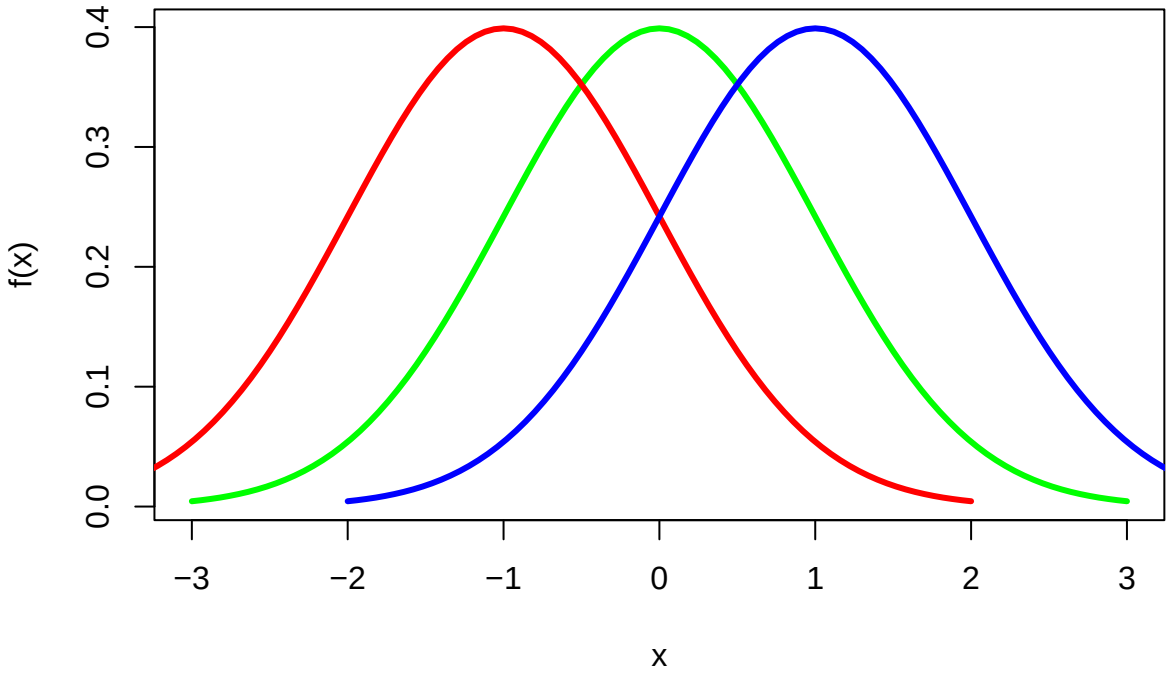
```
dpois(3,10^6* 1e-06 )
```

```
## [1] 0.06131324
```

2 Distribuição Normal

2.1 Diferentes médias

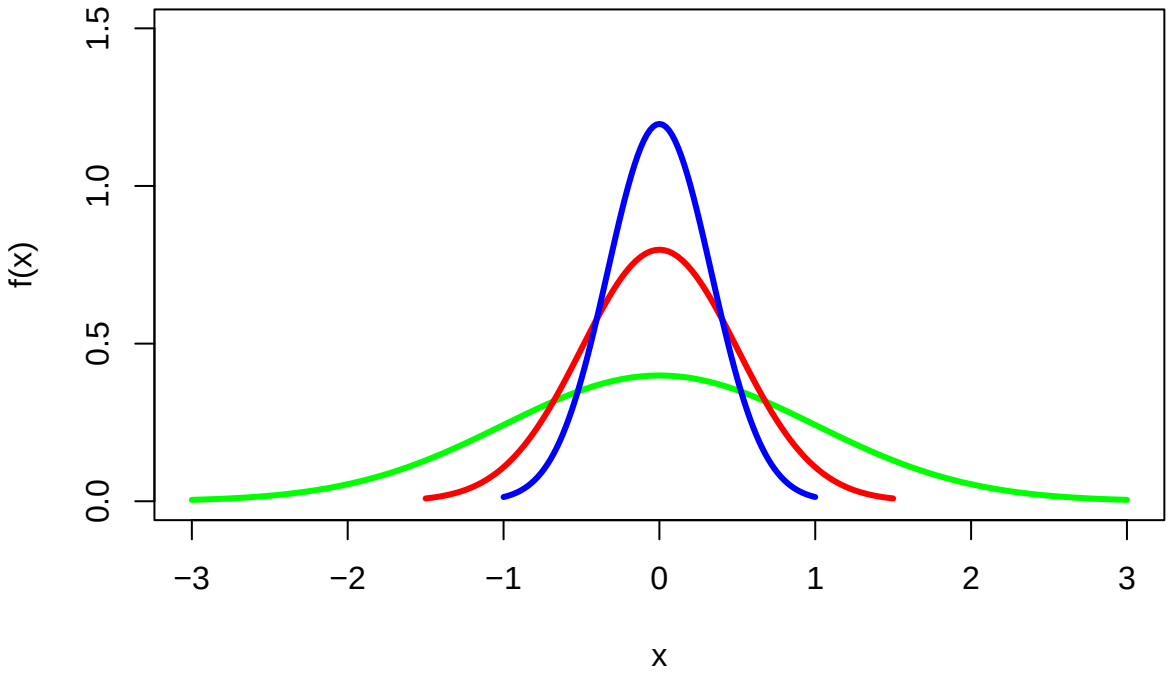
```
a<- 0;b<- 1
curve(dnorm(x, a, b),
      a-3*b,
      a+3*b,
      col="green",
      lwd=3,
      xlab = "x",
      ylab="f(x)")
a<- -1;b<- 1
curve(dnorm(x, a, b),
      a-3*b,
      a+3*b,
      col="red",
      lwd=3,
      xlab = "x",
      ylab="f(x)", add=TRUE)
a<- 1;b<- 1
curve(dnorm(x, a, b),
      a-3*b,
      a+3*b,
      col="blue",
      lwd=3,
      xlab = "x",
      ylab="f(x)", add=TRUE)
```



2.2 Diferentes variâncias

```
a<- 0;b<- 1
curve(dnorm(x, a, b),
      a-3*b,
      a+3*b,
      col="green",
      lwd=3,
      xlab = "x",
      ylab="f(x)",
      ylim=c(0,1.5))
a<- 0;b<- 1/2
curve(dnorm(x, a, b),
      a-3*b,
      a+3*b,
      col="red",
      lwd=3,
      xlab = "x",
      ylab="f(x)", add=TRUE)
a<- 0;b<- 1/3
curve(dnorm(x, a, b),
      a-3*b,
      a+3*b,
      col="blue",
```

```
      lwd=3,
      xlab = "x",
      ylab="f(x)", add=TRUE)
```




```
pnorm(0, 0, 1)
```

```
## [1] 0.5
```

```
pnorm(1, 0, 1)
```

```
## [1] 0.8413447
```

```
pnorm(3, 0, 1)
```

```
## [1] 0.9986501
```

```
pnorm(1, 0, 1, lower.tail = FALSE)
```

```
## [1] 0.1586553
```

```r
pnorm(1.06, 0, 1)
```

```
## [1] 0.8554277
```

```r
pnorm(34, 30, 4, lower.tail = FALSE)
```

```
## [1] 0.1586553
```

```r
pnorm(42, 30, 4)
```

```
## [1] 0.9986501
```

```r
pnorm(42, 30, 4)-pnorm(34, 30, 4)
```

```
## [1] 0.1573054
```