```
R version 4.0.2 (2020-06-22) -- "Taking Off Again"
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Platform: x86_64-w64-mingw32/x64 (64-bit)

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>    #Experiment4
>    #REg no: 19BCD7143
>    #17th November
>    #Name: Amlan Nayak
>    #SLOT : L1
>    #Probab;ity mass function and cumulative distritbutio fucntion
>    x<-seq(0,10,length=11)
>    x
 [1]  0  1  2  3  4  5  6  7  8  9 10
>   [1]  0  1  2  3  4  5  6  7  8  9 10
Error: unexpected '[' in "  ["
>    m<-c(0:10)
>    m
 [1]  0  1  2  3  4  5  6  7  8  9 10
>   [1]  0  1  2  3  4  5  6  7  8  9 10
Error: unexpected '[' in "  ["
>    f<-dbinom(x,10,0.5)
>    f
 [1] 0.0009765625 0.0097656250 0.0439453125 0.1171875000 0.2050781250
 [6] 0.2460937500 0.2050781250 0.1171875000 0.0439453125 0.0097656250
[11] 0.0009765625
>   [1] 0.0009765625 0.0097656250 0.0439453125 0.1171875000 0.2050781250
Error: unexpected '[' in "  ["
>   [6] 0.2460937500 0.2050781250 0.1171875000 0.0439453125 0.0097656250
Error: unexpected '[' in "  ["
>   [11] 0.0009765625
Error: unexpected '[' in "  ["
>    plot(x,f,"h",main="binomial pmf for p=0.5")
>    points(x,f,pch=16)
>    plot(x,f,type="1",col='blue')
Error in plot.xy(xy, type, ...) : invalid plot type '1'
>   Error in plot.xy(xy, type, ...) : invalid plot type '1'
Error: unexpected 'in' in "  Error in"
>    plot(x,f,type="l",col='blue')
>
>      #cumulative distribution
>      F<-pbinom(3,10,0.5)
>    F
[1] 0.171875
>   [1] 0.171875
Error: unexpected '[' in "  ["
>    qbinom(0.2,10,0.5)
[1] 4
>   [1] 4
Error: unexpected '[' in "  ["
>    qbinom(0.4,10,0.5)
[1] 5
>   [1] 5
Error: unexpected '[' in "  ["
>    qbinom(0.6,10,0.5)
[1] 5
>   [1] 5
Error: unexpected '[' in "  ["
```
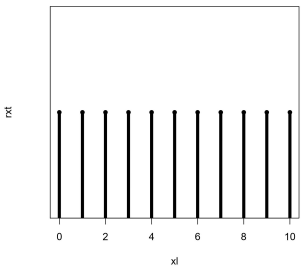

```
>    qbinom(0.65,10,0.5)
[1] 6
>   [1] 6
Error: unexpected '[' in "  ["
>    rbinom(100,10,0.5)
  [1] 6 5 6 3 5 2 3 7 5 3 3 4 4 5 6 6 8 4 5 4 7 4 5 4 4 5 4 4 6 3 4 3 5 4 3 6 6
 [38] 4 7 4 5 5 3 4 5 2 7 7 6 2 6 4 5 6 5 5 5 5 2 6 5 6 8 5 3 3 6 4 3 5 8 6 4 7
 [75] 4 5 5 3 8 6 7 3 4 6 6 4 3 2 4 6 3 3 4 5 3 4 2 9 4 6
>   [1] 3 5 7 4 5 3 5 7 8 3 5 2 4 6 7 4 8 5 5 6 5 7 8 6 3 5 3 6 5 3 3 6 4
Error: unexpected '[' in "  ["
>   [34] 7 6 5 4 6 6 4 3 7 8 4 6 4 7 8 3 7 5 4 5 6 7 5 4 5 5 5 5 8 7 5 4 4
Error: unexpected '[' in "  ["
>   [67] 3 4 6 5 8 7 4 7 6 5 6 5 3 2 2 6 5 6 7 6 6 7 5 6 5 3 6 6 5 5 7 7 3
Error: unexpected '[' in "  ["
>   [100] 6
Error: unexpected '[' in "  ["
>
>
>      #example problem
>      xl<-sort(unique(x))
>    x1
Error: object 'x1' not found
>   Error: object 'x1' not found
Error: unexpected string constant in "  Error: object 'x1'"
>    xl
 [1]  0  1  2  3  4  5  6  7  8  9 10
>   [1]  0  1  2  3  4  5  6  7  8  9 10
Error: unexpected '[' in "  ["
>    xt<-table(x)
>    xt
x
 0  1  2  3  4  5  6  7  8  9 10
 1  1  1  1  1  1  1  1  1  1  1
>   x
 [1]  0  1  2  3  4  5  6  7  8  9 10
>   0  1  2  3  4  5  6  7  8  9 10
Error: unexpected numeric constant in "  0  1"
>   1  1  1  1  1  1  1  1  1  1  1
Error: unexpected numeric constant in "  1  1"
>    rxt<-xt/length(xt)
>    rxt
x
         0          1          2          3          4          5          6
0.09090909 0.09090909 0.09090909 0.09090909 0.09090909 0.09090909 0.09090909
         7          8          9         10
0.09090909 0.09090909 0.09090909 0.09090909
>   x
 [1]  0  1  2  3  4  5  6  7  8  9 10
>   0          1          2          3          4          5
Error: unexpected numeric constant in "  0          1"
>   0.09090909 0.09090909 0.09090909 0.09090909 0.09090909 0.09090909
Error: unexpected numeric constant in "  0.09090909 0.09090909"
>   6          7          8          9         10
Error: unexpected numeric constant in "  6          7"
>   0.09090909 0.09090909 0.09090909 0.09090909 0.09090909
Error: unexpected numeric constant in "  0.09090909 0.09090909"
>    length(xt)
[1] 11
>   [1] 11
Error: unexpected '[' in "  ["
>    plot(xl,rxt,"h",lwd=5)
>    points(xl,rxt,pch=16)
>
```



```
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>  #Suppose there are twelve multiple choice questions in an English class quiz
>  #Each question has five possible answers, and only one of them is correct.
>  #Find the probability of having four or less correct answers if a student attempts to answe
r every question at random.
>  #Solution
>  dbinom(4, size=12, prob=0.2)
[1] 0.1328756
>   dbinom(0, size=12, prob=0.2) +
+ + + dbinom(1, size=12, prob=0.2) +
+ + + dbinom(2, size=12, prob=0.2) +
+ + + dbinom(3, size=12, prob=0.2) +
+ + + dbinom(4, size=12, prob=0.2)
[1] 0.9274445
> pbinom(4, size=12, prob=0.2)
[1] 0.9274445
>
```