

```

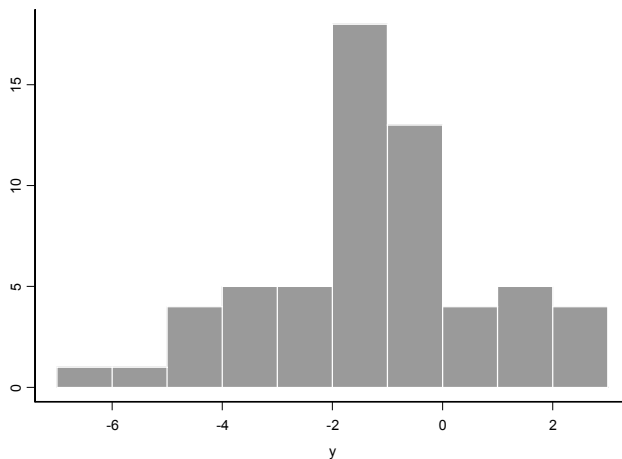
> y_rnorm(60,mean=-1,sd=2)
> y
[1] -0.98175070 -4.91445966 -2.68643847 -3.28473828 -4.25172796
[6] -2.18630652 -1.55405318 -3.07305096 -1.38946126 -2.90427477
[11] -0.25537134 -1.69133460 -0.86723840 -2.42580653 -4.34651773
[16] -2.29383330 -1.89285064 -0.02015485 -0.10179586 -0.98262983
[21] -1.09446407  2.38606347  0.49918117 -0.62712390  1.11215095
[26] -1.36218110 -1.17422789 -1.77680582  1.47615401 -1.36888905
[31] -1.52585353 -0.82825771 -3.80944968 -1.15030608  0.44647233
[36]  1.94886470  1.97185470 -1.21983333 -0.51965671  0.75541669
[41] -0.55314211 -4.61453072 -6.23041660 -1.37580291 -1.27820110
[46] -1.12178518 -0.31130195 -5.19556840 -3.28183439  2.81142272
[51] -0.48735156  2.12194139 -0.32725220  1.66531386 -1.91864823
[56] -1.36701084  2.67125093  0.27302837 -3.75869476 -1.49091925

```

```

> hist(y)

```



```

> chisq.gof(y,dist="norm",mean=-1,sd=2)

```

### Chi-square Goodness of Fit Test

```

data: y
Chi-square = 11.8667, df = 10, p-value = 0.2941
alternative hypothesis:
  True cdf does not equal the normal Distn. for at least one sample point.

```

```

> mean(y)
[1] -1.19557
> sqrt(var(y))
[1] 2.002938
> chisq.gof(y,dist="norm",mean=mean(y),sd=sqrt(var(y)))

```

### Chi-square Goodness of Fit Test

```

data: y

```

Chi-square = 15.5333, df = 10, p-value = 0.1138

alternative hypothesis:

True cdf does not equal the normal Distn. for at least one sample point.

```
> chisq.gof(y,dist="norm",n.param.est=2,mean=mean(y),sd=sqrt(var(y)))
```

#### Chi-square Goodness of Fit Test

data: y

Chi-square = 15.5333, df = 8, p-value = 0.0496

alternative hypothesis:

True cdf does not equal the normal Distn. for at least one sample point.

```
> x_rbinom(20,size=5,prob=1/2)
```

```
> x
```

```
[1] 2 3 3 4 1 2 4 3 1 3 3 4 2 2 3 3 2 4 3 1
```

```
> table(x)
```

```
1 2 3 4
```

```
3 5 8 4
```

```
> cut_quantile(x)
```

```
> cut
```

```
0% 25% 50% 75% 100%
```

```
1 2 3 3 4
```

```
> table(cut(x,cut))
```

```
1+ thru 2 2+ thru 3 3+ thru 3 3+ thru 4
```

```
5 8 0 4
```

```
> chisq.gof(x,cut.points=cut,dist="binom",size=5,prob=1/2)
```

#### Chi-square Goodness of Fit Test

data: x

Chi-square = NA, df = 3, p-value = NA

alternative hypothesis:

True cdf does not equal the binomial Distn. for at least one sample point.

Warning messages:

1: 3 observations do not fall within within the given cutpoints.

There are removed. in: chisq.gof(x, cut.points = cut, dist = "binom", size = 5, prob = 1/2)

2: Expected counts < 5. Chi-squared approximation may not be appropriate. in: chisq.gof(x, cut.points = cut, dist = "binom", size = 5, prob = 1/2)

```
> cut[1]_cut[1]-1
```

```
> cut[4]_cut[4]+1
```

```
> cut[5]_cut[5]+1
```

```
> cut
```

```
0% 25% 50% 75% 100%
```

```

    0  2  3  4  5
> table(cut(x,cut))
0+ thru 2 2+ thru 3 3+ thru 4 4+ thru 5
   8    8    4    0
> chisq.gof(x,cut.points=cut,dist="binom",size=5,prob=1/2)$e
 25% 50% 75% 100%
9.375 6.25 3.125 0.625
Warning messages:
  Expected counts < 5. Chi-squared approximation may not
      be appropriate. in: chisq.gof(x, cut.points = cu
t, dist = "binom", size = 5, prob = 1/2)
> chisq.gof(x,cut.points=cut,dist="binom",size=5,prob=1/2)

```

### Chi-square Goodness of Fit Test

```

data: x
Chi-square = 1.5617, df = 3, p-value = 0.6681
alternative hypothesis:
  True cdf does not equal the binomial Distn. for at least one sample po
int.

```

```

Warning messages:
  Expected counts < 5. Chi-squared approximation may not
      be appropriate. in: chisq.gof(x, cut.points = cu
t, dist = "binom", size = 5, prob = 1/2)

```

```

> x_rep(0:7,c(89,143,94,42,20,8,3,1))
> x
 [1] 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
 [34] 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
 [67] 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1 1 1 1 1 1 1 1 1 1 1
 [100] 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
 [133] 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
 [166] 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
 [199] 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
 [232] 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
 [265] 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
 [298] 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 3 3 3 3
 [331] 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3
 [364] 3 3 3 3 3 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 5 5 5 5 5 5
 [397] 6 6 6 7
> table(x)
 0  1  2  3  4  5  6  7
89 143 94 42 20 8 3 1
> cut_c(0:7)
> table(cut(x,cut))
0+ thru 1 1+ thru 2 2+ thru 3 3+ thru 4 4+ thru 5 5+ thru 6 6+ thru 7
 143    94    42    20     8     3     1
> cut_c(-1:7)
> table(cut(x,cut))

```

```

-1+ thru 0 0+ thru 1 1+ thru 2 2+ thru 3 3+ thru 4 4+ thru 5
      89    143    94    42    20    8
5+ thru 6 6+ thru 7
      3     1

```

```

> table(cut(x,cut))
-1+ thru 0 0+ thru 1 1+ thru 2 2+ thru 3 3+ thru 4 4+ thru 5
      89    143    94    42    20    8
      5+ thru 6 6+ thru 7
          3     1
> chisq.gof(x,cut.points=cut,n.param.est=1,dist="pois",lambda=mean(x))

```

### Chi-square Goodness of Fit Test

data: x  
Chi-square = 6.7353, df = 6, p-value = 0.346  
alternative hypothesis:  
True cdf does not equal the poisson Distn. for at least one sample point.

#### Warning messages:

```

Expected counts < 5. Chi-squared approximation may not
be appropriate. in: chisq.gof(x, cut.points = cu
t, n.param.est = 1, dist = "pois", lambda ...
> chisq.gof(x,cut.points=cut,n.param.est=1,dist="pois",lambda=mean(x))$e
[1] 88.8069175 133.6544109 100.5749442 50.4550970 18.9837302
[6] 5.7141028 1.4332875 0.3081568

```

#### Warning messages:

```

Expected counts < 5. Chi-squared approximation may not
be appropriate. in: chisq.gof(x, cut.points = cu
t, n.param.est = 1, dist = "pois", lambda ...
> chisq.gof(x,cut.points=cut,n.param.est=1,dist="pois",lambda=mean(x))$c
[1] 89 143 94 42 20 8 3 1

```

#### Warning messages:

```

Expected counts < 5. Chi-squared approximation may not
be appropriate. in: chisq.gof(x, cut.points = cu
t, n.param.est = 1, dist = "pois", lambda ...
> cut_c(-1:4,7)
> table(cut(x,cut))
-1+ thru 0 0+ thru 1 1+ thru 2 2+ thru 3 3+ thru 4 4+ thru 7
      89    143    94    42    20    12
> chisq.gof(x,cut.points=cut,n.param.est=1,dist="pois",lambda=mean(x))$e
[1] 88.806918 133.654411 100.574944 50.455097 18.983730 7.455547
> chisq.gof(x,cut.points=cut,n.param.est=1,dist="pois",lambda=mean(x))

```

### Chi-square Goodness of Fit Test

data: x  
Chi-square = 5.325, df = 4, p-value = 0.2555  
alternative hypothesis:

True cdf does not equal the poisson Distn. for at least one sample point.