Chi-squared test for given probabilities with simulated p-value (based on 2000 replicates)

data: x X-squared = 140.37, df = NA, p-value = 0.0004998

```
2.00
                                            3.00
                                                              13.00
                                                                                                                                                                                          1.00
                        2.00
                                                                                     2.00
                                                                                                         4.00
                                                                                                                             1.00
                                                                                                                                                  1.00
                                                                                                                                                                      2.00
1.00
                   4.00
                                        1.00
                                                            1.00
                                                                                 1.00
                                                                                                     1.00
                                                                                                                         2.00
                                                                                                                                             1.00
                                                                                                                                                                  1.00
                                                                                                                                                                                      1.00
                                                                                                                                                                                                          4.00
3.00
                   1.00
                                                            1.00
                                                                                 2.00
                                                                                                     0.00
                                                                                                                         0.00
                                                                                                                                             0.00
                                                                                                                                                                 0.00
                                                                                                                                                                                      0.00
                                                                                                                                                                                                          0.00
                                        3.00
0.00
                   0.00
                                        0.00
                                                            0.00
                                                                                 0.00
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                                                                                                                                             0.00
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0.00
                    0.00
                                        0.00
                                                            0.00
                                                                                 0.00
                                                                                                     0.00
                                                                                                                         0.00
(10.257) (0.819) (1.781) (2.558) (1.627) (0.937) (0.101) (0.569) (1.286) (0.165) (0.165)
0.194) ( 1.513) ( 1.089) ( 2.298) ( 0.823) ( 0.146) ( 0.136) ( 1.900) ( 0.851) ( 0.700) (
1.537) (4.197) (1.327) (1.114) (1.023) (1.528) (0.831) (0.087) (0.039) (0.929) (
(0.905) (0.879) (0.631) (0.810) (0.553) (1.358) (0.757) (1.209) (1.728) (1.306)
1.105) ( 1.092) ( 0.720) ( 0.024) ( 0.500) ( 0.659) ( 0.150) ( 0.668) ( 0.379) ( 1.205)
[6.6e+00] [1.7e+00] [8.3e-01] [4.3e+01] [8.6e-02] [1.0e+01] [8.0e+00] [3.3e-01] [4.0e-01]
[4.2e+00] [3.4e+00] [4.1e+00] [7.3e-03] [7.3e-01] [3.8e-02] [5.0e+00] [2.5e+01] [4.3e-01]
[2.6e-02] [1.3e-01] [3.9e+00] [3.4e-01] [8.0e-02] [3.2e+00] [5.4e-04] [1.5e-01] [8.3e-01]
[8.7e-02] [3.9e-02] [9.3e-01] [1.3e+00] [9.0e-01] [8.8e-01] [6.3e-01] [8.1e-01] [5.5e-01]
\lceil 1.4e+00 \rceil \lceil 7.6e-01 \rceil \lceil 1.2e+00 \rceil \lceil 1.7e+00 \rceil \lceil 1.1e+00 \rceil \lceil 1.1e+00 \rceil \lceil 7.2e-01 \rceil \lceil 2.4e-02 \rceil \lceil 5.0e-01 \rceil
[6.6e-01] [1.5e-01] [6.7e-01] [3.8e-01] [1.2e+00]
<-2.578> < 1.305> < 0.913> < 6.529> < 0.293> < 3.163> < 2.830> < 0.571> < 0.630> < 2.056> <
1.831> < 2.022> <-0.085> <-0.856> < 0.195> < 2.234> < 5.048> <-0.653> < 0.161> < 0.358> <
1.986 > < -0.584 > < -0.284 > < 1.787 > < -0.023 > < 0.381 > < -0.912 > < -0.294 > < -0.197 > < -0.964 > < -0.912 > < -0.294 > < -0.197 > < -0.964 > < -0.912 > < -0.294 > < -0.197 > < -0.964 > < -0.912 > < -0.912 > < -0.294 > < -0.197 > < -0.964 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -0.912 > < -
<-1.143> <-0.951> <-0.938> <-0.795> <-0.900> <-0.744> <-1.166> <-0.870> <-1.099> <-1.314>
<-1.051> <-1.045> <-0.848> <-0.155> <-0.707> <-0.812> <-0.388> <-0.817> <-0.615> <-1.098>
```

## key:

observed
(expected)
[contribution to X-squared]
<Pearson residual>