

different definitions of quantiles:

quantile of the Binomial CDF:

=====

invBinomialCdf(0.05, 100, 0.3)

23

WARNING!

prob = 0.05

xInv = 23

prob-0.01 = 0.04

*xInv = 22

BinomialCdf(23, 100, 0.3)

0.0755307673

BinomialCdf(22, 100, 0.3)

0.04786573865

invBinomialCdf(0.95, 100, 0.3)

38

WARNING!

prob = 0.95

xInv = 38

prob-0.01 = 0.94

*xInv = 37

BinomialCdf(38, 100, 0.3)

0.9660210017

BinomialCdf(37, 100, 0.3)

0.9469544142

mathematica by Wolfram version 8
=====

Quantile[dist,q] is equivalent to
InverseCDF[dist,q]

Quantile[dist,q] gives the q-th quantile of the symbolic distribution dist.

InverseCDF[dist,q] gives the inverse of the cumulative distribution function for the symbolic distribution dist as a function of the variable q.

For a **continuous** distribution **dist** the inverse CDF at q is the value x such that $CDF[dist,x]=q$.
For a **discrete** distribution **dist** the inverse CDF at q is the **smallest integer x** such that $CDF[dist,x] \geq q$.

```
InverseCDF[BinomialDistribution[100, 0.3], 0.05]
23
Quantile[BinomialDistribution[100, 0.3], 0.05]
23
CDF[BinomialDistribution[100, 0.3], 23]
0.0755308
CDF[BinomialDistribution[100, 0.3], 22]
0.0478657
```

ClassPad and mathematica go hand in hand!

Now consider the Student-t-distribution:
=====

invTCdf(0.05,100)

1.660234326

invTCdf(0.95,100)

-1.660234326

mathematica

Quantile[StudentTDistribution[100],0.05]

-1.66023

Quantile[StudentTDistribution[100],0.95]

1.66023

Here ClassPad and mathematica did not go hand in hand!

The 5%-quantile in mathematica equals the 95%-quantile in ClassPad!

Inv. Distribution in the Stat-Menu



In the help-window by CASIO we can read:
Calculates the Student-t cumulative probability density function boundary value for a specified percentage area **in the right tail.**

In the help-window by CASIO we can read:
Calculates the number of trials needed for a specified probability of success for the binomial cumulative probability distribution.