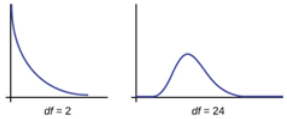
Ch 11.1 Facts about Chi-square distribution

Notation for chi-square distribution is χ^2 . It is a distribution with degree of freedom (df = n -1).

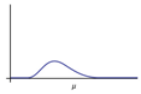
Characteristic of chi-square distribution.

i) Shape of the distribution is right skew,

non-symmetrical. There is a different chi-square curve for each df. When df > 90, the chi-square curve approximates the normal distribution.



ii) mean μ = df (n-1), σ = $2\sqrt{df}$. The mean is located just right of the peak.



iii) = sum of (n-1) independent, standard normal variable. χ^2 is always positive.

Chi-square distribution calculator:

http://onlinestatbook.com/2/calculators/chi_square_prob.html

The calculator can be used to find area to the right of a chi-square value P(χ^2 > a)

Ex. Find probability that χ^2 is greater than 31 when

df = 10.

Enter chi-square = 31, df = 10, calculate.