Normal

* + - 1. Generate 10 random numbers form a normal distribution with mean 10 and variance 25

rnorm(10,10,5)

2.Plot pdf of a standard normal distribution by generating data ( -4 ,4)

curve(dnorm(x,0,1),-4,4)

1.

rt(10,24)#24 is degree of freedom

rchisq(10,7)

* + - 1. Obtain the 0.95 quantile of a hi square distribution with 15 degrees of freedom.

qchisq(0.95,15)

* + - curve(dt(x,2),from=-3,to=3,col="1",lty=1, ylim=c(0,0.5),

xlim=c(-3,3),ylab="f(x)",xlab="x",main="pdf of t-distribution and normal distribution")

curve(dt(x,5),from=-3, to=3, col="2",lty=2, add=T)

curve(dt(x,10),from=-3,to=3,col="3",lty=3, add=T)

curve(dt(x,30),from=-3, to=3, col="4",lty=4, add=T)

curve(dt(x,50),from=-3, to=3, col="5", lty=5,add=T)

curve(dt(x,100),from=-3, to=3, col="6", lty=6,add=T)

curve(dnorm(x,0,1),from=-3, to=3, col="7",lty=7, add=T)

legend(0.5,0.5,legend=c(expression(n==2),expression(n==5),expression(n==10), expression(n==30),expression(n==50),expression(n==100),expression("Normal")),lty=1:7,col=c(1,2,3,4,5,6,7))