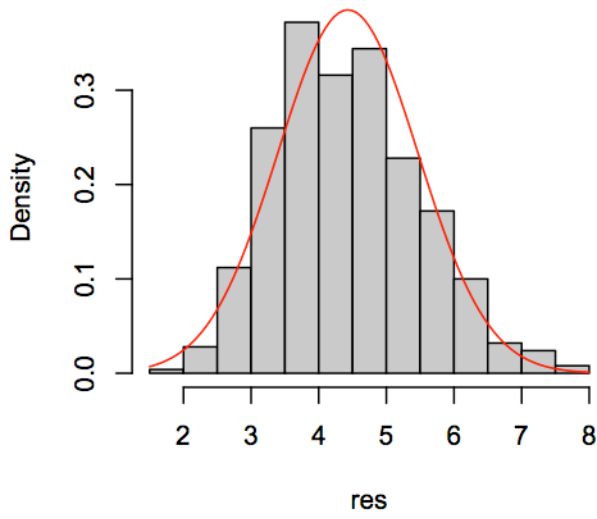
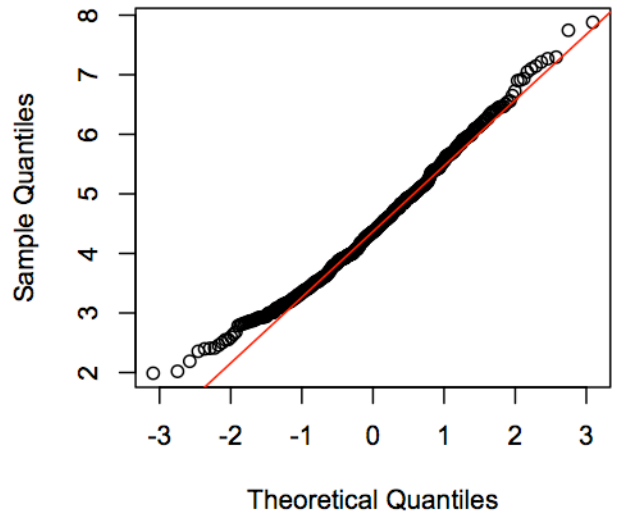



```
> # Superimpose the bell curve for given mean and sd.
>
> for (j in c(5,10,20,30)){
+   res=c()
+   for (i in 1:m){
+     res[i]=mean(rweibull(j,alpha,beta))
+   }
+   hist(res,prob=TRUE,main=paste("Weibull(5,2) Samp. Dist. Xbar with n=",j),col="gray")
+   curve(dnorm(x,mu,sqrt(sigma2/j)),add=TRUE,col=j/5+1)
+   qqnorm(res)
+1  qqline(res,col=j/5+1)
+ }
>
```

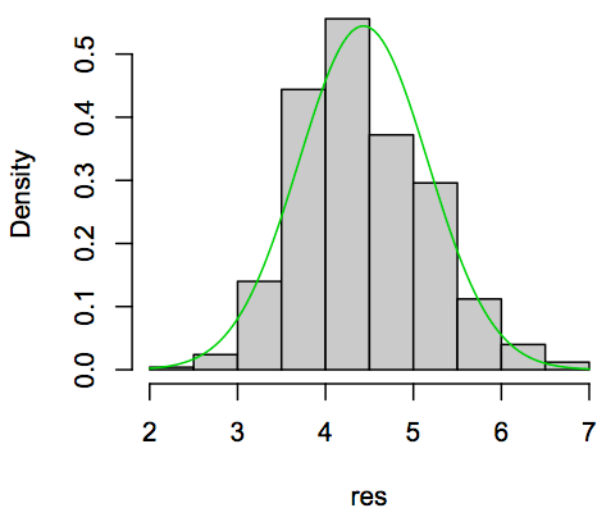
Weibull(5,2) Samp. Dist. Xbar with n= 5



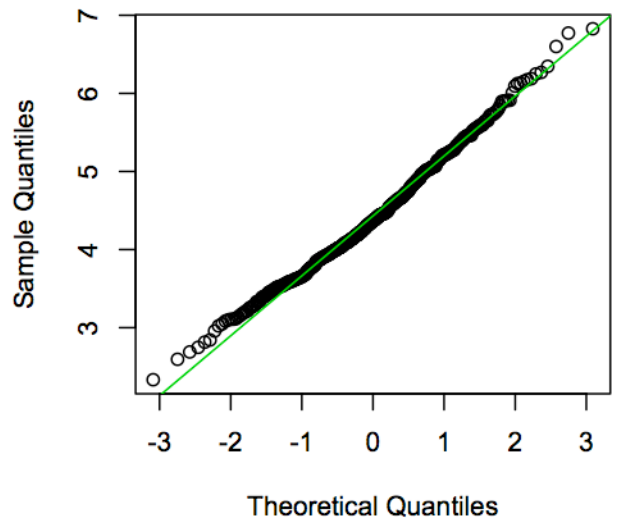
Normal Q-Q Plot



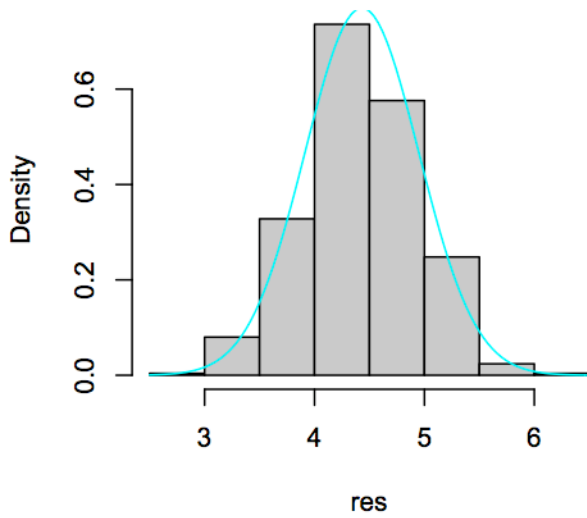
Weibull(5,2) Samp. Dist. Xbar with n= 10



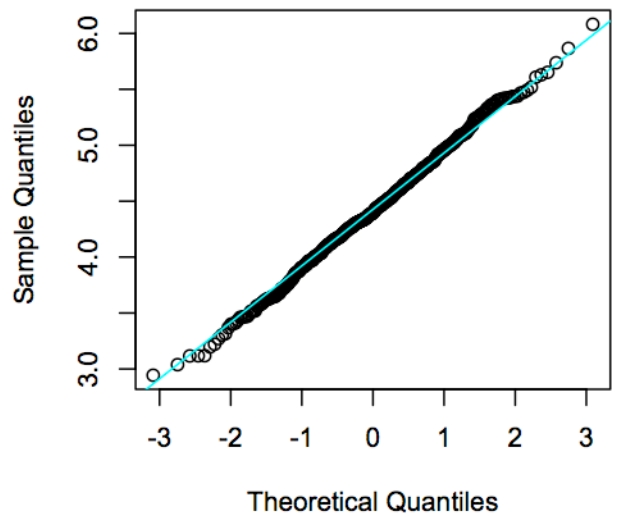
Normal Q-Q Plot



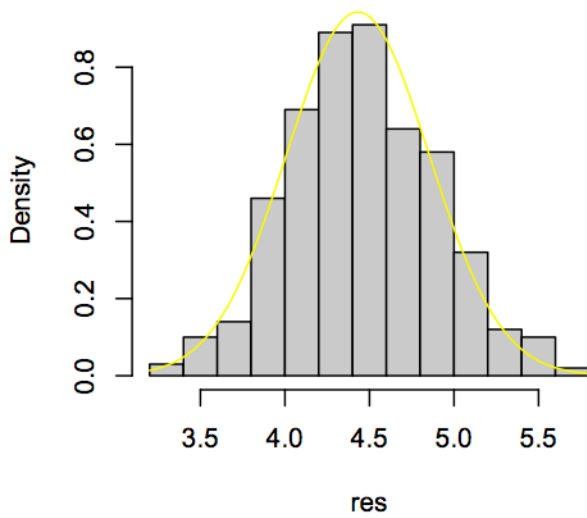
Weibull(5,2) Samp. Dist. Xbar with n= 20



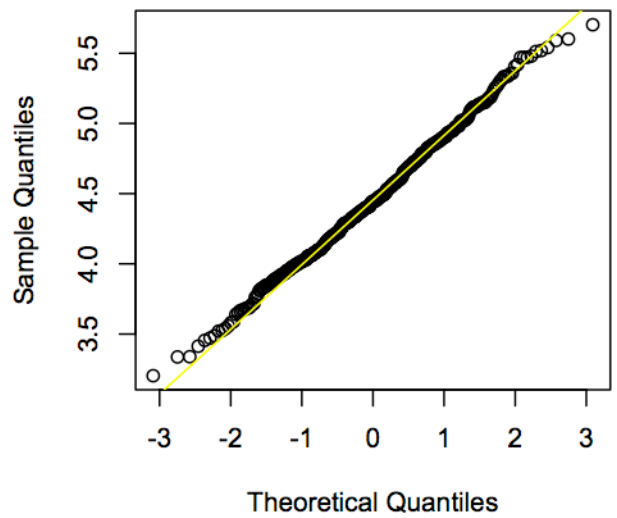
Normal Q-Q Plot



Weibull(5,2) Samp. Dist. Xbar with n= 30



Normal Q-Q Plot

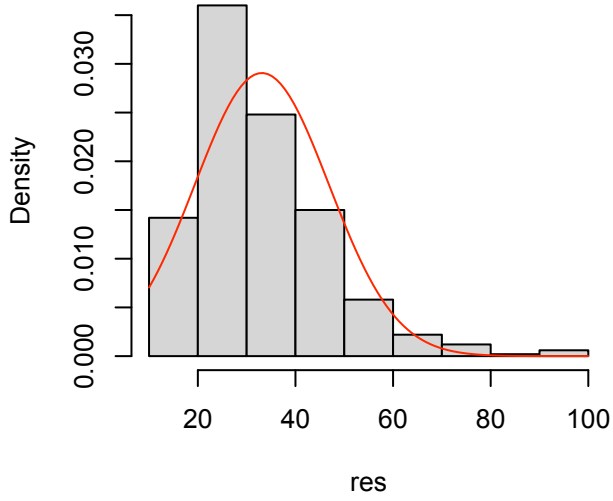


```

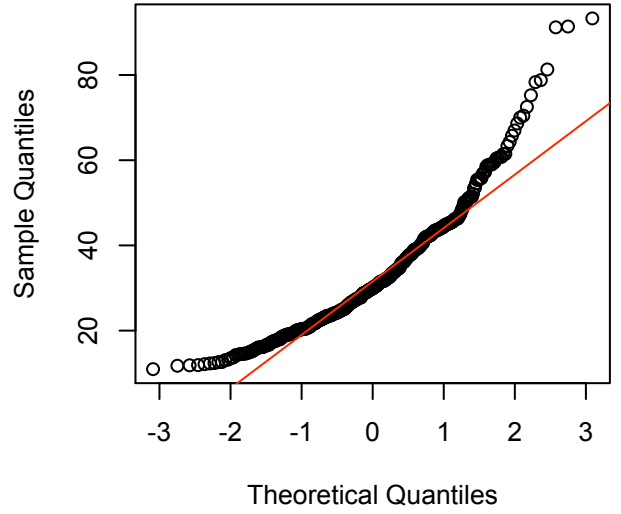
>
> ##### SIMULATION OF MEANS FROM LOGNORMAL DISTRIBUTION #####
>
> # Do prob 5.3[45] of Devore 5th ed.
> # Choose samples from lognormal with E(ln X)=3 and V(ln X)=1
> # Information about Lognormal Distribution
> help(dlnorm)
>
> # Find the mean and sd of this lognormal dist.
>
> mul=3; signal=1; sigma2l=sigma1l^2
>
> mu=exp(mul+sigma2l/2);mu
[1] 33.11545
> sigma2=mu^2*(exp(sigma2l)-1);sigma2
[1] 1884.325
>
> # Loop through sample sizes. Then loop through 500 random samples
> # of size j taken from LogNormal(mul,signal), compute the mean of the sample
> # and record the mean in the vector res. For each 500 means, plot histogram and QQ plot.
>
> for (j in c(10,20,30,50)){
+   res=c()
+   for (i in 1:m){
+     res[i]=mean(rlnorm(j,mul,signal))
+   }
+   hist(res,prob=TRUE,main=paste("Lognormal(3,1) SampDist. Xbar, n=",j),col=gray(.8))
+   curve(dnorm(x,mu,sqrt(sigma2/j)),add=TRUE,col=j/10+1)
+   qqnorm(res)
+   qqline(res,col=j/10+1)
+ }
>

```

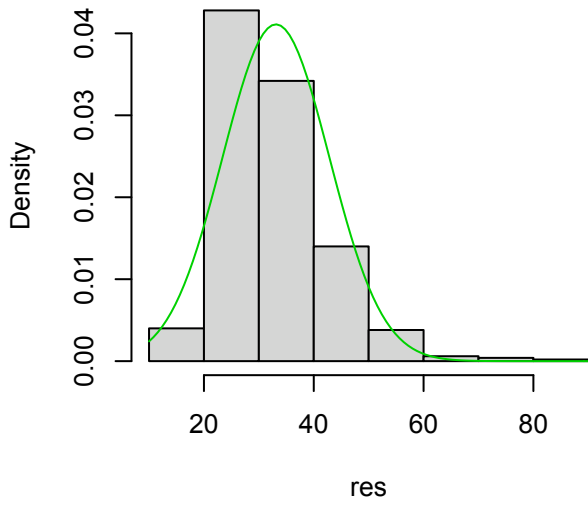
Lognormal(3,1) SampDist. Xbar, n= 10



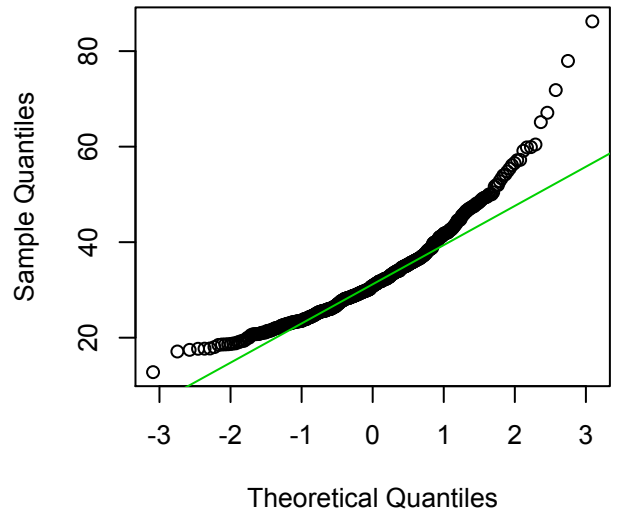
Normal Q-Q Plot



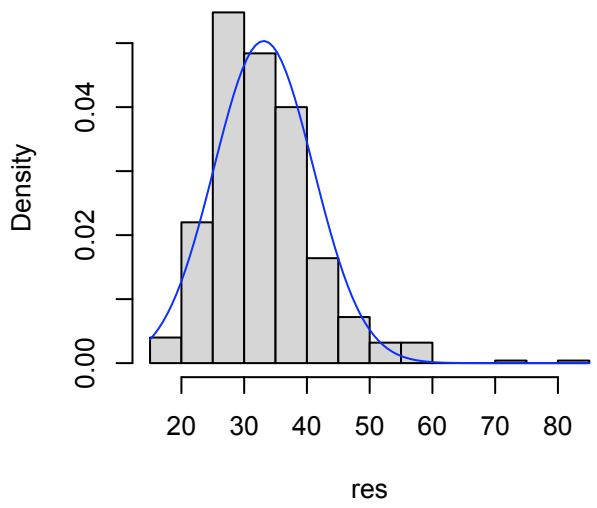
Lognormal(3,1) SampDist. Xbar, n= 20



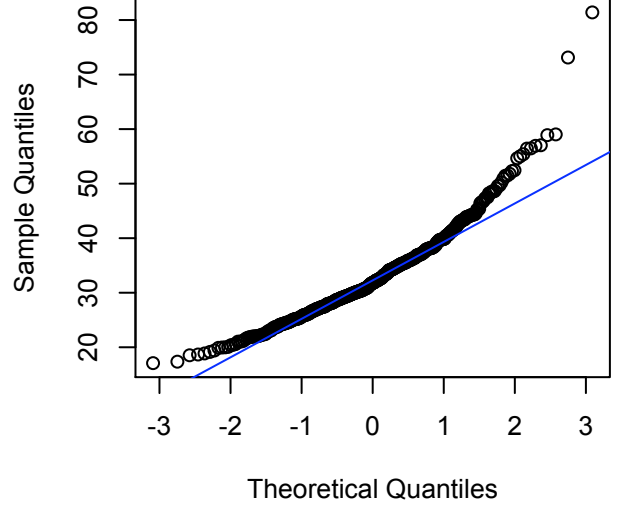
Normal Q-Q Plot



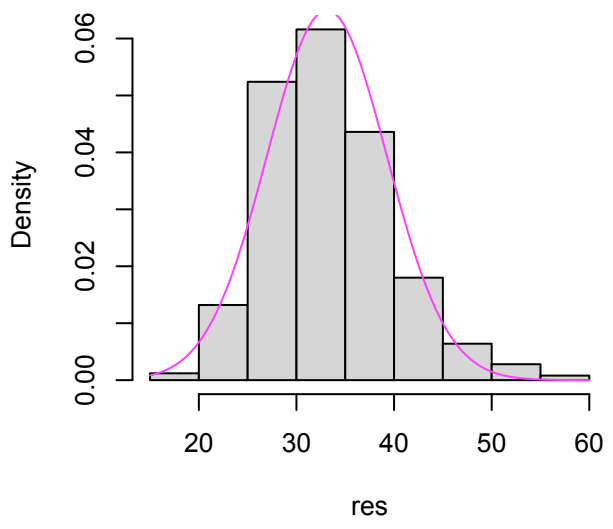
Lognormal(3,1) SampDist. Xbar, n= 30



Normal Q-Q Plot



Lognormal(3,1) SampDist. Xbar, n= 50



Normal Q-Q Plot

