

Daniel Standage
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Stat 430 - Wei-chen Chen
R Tutorial

1.

The `seq(n,k)` function returns a vector of all the integers between n and k (inclusive), while the `rep(n,k)` returns a vector containing k entries of the value n . The results are shown below.

```
> seq(1, 5)
[1] 1 2 3 4 5
> rep(1, 5)
[1] 1 1 1 1 1
```

2.

- (a)
 - The χ^2 distribution uses the suffix *chisq* (e.g., *dchisq*, *qchisq*, *pchisq*, *rchisq*)
 - The t distribution uses the suffix *t* (e.g., *dt*, *qt*, *pt*, *rt*)
 - The F distribution uses the suffix *f* (e.g., *df*, *qf*, *pf*, *rf*)
 - The *Binomial* distribution uses the suffix *binom* (e.g., *dbinom*, *qbinom*, *pbinom*, *rbinom*)
 - The *Poisson* distribution uses the suffix *pois* (e.g., *dpois*, *qpois*, *ppois*, *rpois*)

(b) These functions belong to the *stats* library.

3.

(a) These are not the same because the *qnorm* function returns a quantile, not a probability.

(b) These are the same because the *pexp* function returns a probability.

4.

(a) These functions belong to the *graphics* library.

(b) These functions write plots out to graphics files so that they can be viewed in other programs.

5.

(a) These functions are for performing Wilcoxon tests, performing analysis of variance, and fitting linear models (respectively).

(b) The *lme* function belongs to the *nlme* library.