Command	Explanation
t.test()	uh, it performs a t-test
prop.test()	performs a test of proportions
qchisq($p, n-1$)	gives x such that $\Pr\left(\chi^2_{n-1} \leq x\right) = p$ for $\chi^2_{n-1} \sim \chi^2(n-1)$
qchisq($p, n-1$, lower.tail=FALSE)	gives x such that $\Pr\left(\chi^2_{n-1} \geq x\right) = p$ for $\chi^2_{n-1} \sim \chi^2(n-1)$
qf(p, v_1, v_2)	gives x such that $\Pr\left(F_{v_1,v_2} \leq x\right) = p$ for $F_{v_1,v_2} \sim F(v_1, v_2)$
qf(p, v_1, v_2, lower.tail=FALSE)	gives x such that $\Pr\left(F_{v_1,v_2} \geq x\right) = p$ for $F_{v_1,v_2} \sim F(v_1, v_2)$
cor(x, y)	finds the sample correlation r_{xy} between x and y
cor.test()	tests whether r_{xy} is statistically significant

Examples

```
t.test(x, mu = 5, conf.level = 0.90)
```
Performs a t-test using data in x for $H_0 : \mu = 5$ against $H_1 : \mu \neq 5$ at 10% significance.

```
t.test(x, alternative = "greater", mu = 5, conf.level = 0.95)
```
Performs a t-test using data in x for $H_0 : \mu \leq 5$ against $H_1 : \mu > 5$ at 5% significance.

```
t.test(x, y, conf.level = 0.95)
```
Performs a t-test using data in x and y for $H_0 : \mu_x = \mu_y$ against $H_1 : \mu_x \neq \mu_y$ at 5% significance.

```
prop.test(94, 100, .90, alternative = "greater", conf.level = 0.95, correct = FALSE)
```
Performs proportions test with 94/100 successes for claim that true proportion is greater than 0.90. Note that the χ^2 test statistic in R output is the square of the z-statistic that we calculate by hand.

```
qchisq(0.05,9, lower.tail = FALSE)
```
Finds the number $\chi^2_{9,0.05}$ such that 5% of the mass of the $\chi^2(9)$ distribution falls above it.

```
cor.test(x,y)
```
Tests whether the correlation coefficient r_{xy} is statistically significant or not.