Command	Explanation	Notes
`cor()`	calculates sample correlation	
`cor.test()`	performs correlation tests	
`lm(y ~ x)`	regresses y on x	
`stargazer()`	shows nicely formatted output	requires "stargazer"
`confint()`	calculates confidence intervals	
`plot()`	creates scatterplot	
`abline()`	adds straight line through current plot	
`summary()`	shows notable statistics	

Example Code. In the following code, I plot some data and its regression line; I test $H_0 : \rho_{xy} \leq 0$ against $\rho_{xy} > 0$; and show regression results, fitted values, residuals, and the 99 percent confidence intervals for β_1 and β_2.

```
#install.packages("stargazer")
library("stargazer")

## Some random data
x = c(0,3,3,4,6)
y = c(2,3,4,5,7)

## Scatter plot of the data
plot(x,y)

## Show correlation, test if it's greater than zero.
cor(x,y)
cor.test(x, y, alternative = "greater")

## Regress y on x
regyx = lm(y ~ x)

## Plot the regression line through the scatter plot
abline(regyx)

## Show regression results
stargazer(regyx, type = "text")

## Show fitted values and residuals
regyx$fitted.values
regyx$residuals

## Show 99 percent confidence interval
confint(regyx, level=0.99)

## Show more detailed info about regression coefficients
summary(regyx)$coefficients
```

The p-value for the correlation test is 0.007222, so we reject the null and conclude $\rho_{xy} > 0$ at 1 percent significance. The regression line has intercept coefficient $b_1 = 1.511$, which is significant at 10 percent; and slope efficient $b_2 = 0.840$, which is significant at 5 percent. Neither are significant at 1 percent, which can be seen directly from the `summary` output or by noting that both 99 percent confidence intervals contain zero.