```
set obs 10000

generate y = runiform()

generate w = rnormal(10,2)

kdensity w

set seed 654321

sample 10

sample 53, count

sum w

scalar M = r(mean)

disp M

generate x0 = rnormal(50,M)

sum x0

clear


sysuse auto

sum mpg, detail

return list

display "IQR = ", r(p75)-r(p25)

display "Standard error = ", r(sd)/sqrt(r(N))

gen guzzle = (mpg > 25 & mpg < .)

logistic foreign guzzle

ereturn list

matrix list e(b)

matrix A = e(b)
```

```stata
local OR = exp(A[1,1])

disp `OR'

display exp(A[1,2] + A[1,1]) / (1 + exp(A[1,2] + A[1,1]))

nlcom exp(_b[_cons] + _b[guzzle]) / ( 1 + exp(_b[_cons] + _b[guzzle]))

lincom _b[_cons] + _b[guzzle], or

predict p_hat, p

tab p_hat

tab foreign guzzle, col

estat classification

return list


logistic foreign guzzle weight price

estat classification

estat gof

lroc

lsens

predict p_hat2, p

hist p_hat2


quietly sum mpg, det

local SE = r(sd)/sqrt(r(N))

local MEAN = r(mean)

local UCL = `MEAN' + 1.96 * `SE'

local LCL = `MEAN' - 1.96 * `SE'

display "95% CI = " `LCL' "," `UCL'

ci mpg
```

```
quietly sum mpg, det

local SE = r(sd)/sqrt(r(N))

local MEAN = r(mean)

local UCL = `MEAN' + invnormal(0.975) * `SE'

local LCL = `MEAN' - invnormal(0.975) * `SE'

display "95% CI = " `LCL' "," `UCL'

quietly ci mpg

display r(lb)


quietly sum mpg, det

local SE = r(sd)/sqrt(r(N))

local MEAN = r(mean)

local UCL = `MEAN' + invttail(73,0.025) * `SE'

local LCL = `MEAN' - invttail(73,0.025) * `SE'


quietly sum mpg, det

scalar MEAN = r(mean)

scalar SE = r(sd)/sqrt(r(N))

scalar LCL =  MEAN - invttail(73,0.025) * SE

scalar UCL =  MEAN + invttail(73,0.025) * SE

display "95% CI = " LCL "," UCL

ci mpg


regress  mpg  weight foreign length

rvfplot
```

```
by foreign, sort: ci mpg

statsby mean=r(mean) lcl=r(lb) ucl=r(ub), by(foreign) clear: ci mpg

list

twoway (scatter mean foreign) (rcap lcl ucl foreign), xtitle(foreign)
ytitle(miles per gallon) xscale(range(-1 2)) xlabel(0 1, valuelabel
notick) legend(off)
```

<u>loops: foreach</u>

```
foreach var of varlist mpg-trunk {

  quietly summarize `var'

  summarize `var' if `var' > r(mean)

  }


local grains "rice wheat flax"
foreach x of local grains {

    display "`x'"

 }


foreach var of newlist z1-z4 {

   gen `var' = runiform()

 }


foreach num of numlist 1/4 8 103 {

   display `num'

 }
```

loops: forvalues

```
forvalues i = 1(1)5 {

   display `i'

 }


forvalues i = 10(-2)1 {

   display `i'

 }


forvalues i = 5 10 : 25 {

    display `i'

 }


forvalues i = 25 20 to 5 {

    display `i'

 }
```