

```
log using "d:\temp\interaction_2020.log", replace
```

```
set more 1
```

```
use http://www.stata-press.com/data/r14/margex, clear
```

```
*****  
* 1. Analyzing a two-ways interaction in the OLS regression  
*****
```

```
reg y i.sex##c.age
```

```
*****  
* 1.1 Average Adjusted Prediction and Average Marginal Effect  
*****
```

```
margins i.sex,  
margins, dydx(i.sex)
```

```
*****  
* 1.2 Adjusted Predictions and Marginal Effects at the Means  
*****
```

```
margins i.sex, atmeans  
margins, dydx(i.sex) atmeans
```

```
*****  
* 1.3 Adjusted Predictions and Marginal Effects at Representative values and  
*****
```

```
margins i.sex, at(age=(20(10)80))  
margins, dydx(i.sex) at(age=(20(10)80))
```

```
*****  
* 2. Analyzing a two-ways interaction in the Logistic regression  
*****
```

```
logit outcome i.sex##c.age
```

```
*****  
* 2.1 Average Adjusted Prediction and Average Marginal Effect  
*****
```

```
margins i.sex,  
margins, dydx(i.sex)
```

```
*****  
* 2.2 Adjusted Predictions and Marginal Effects at the Means  
*****
```

```
margins i.sex, atmeans  
margins, dydx(i.sex) atmeans
```

```
*****  
* 2.3 Adjusted Predictions and Marginal Effects at Representative values and  
*****
```

```
margins i.sex, at(age=(20(10)60))  
margins, dydx(i.sex) at(age=(20(10)60))
```

```
*****  
* 3. multinomial logistic regression  
*****
```

```
mlogit group i.sex##c.age
```

```
*****  
* 3.1 Average Adjusted Prediction and Average Marginal Effect  
*****
```

```
margins i.sex,  
margins, dydx(i.sex)
```

```
*****  
* 3.2 Adjusted Predictions and Marginal Effects at the Means  
*****
```

```
margins i.sex, atmeans  
margins, dydx(i.sex) atmeans
```

```
*****  
* 3.3 Adjusted Predictions and Marginal Effects at Representative values and  
*****
```

```
margins i.sex, at(age=(20(10)60))  
margins, dydx(i.sex) at(age=(20(10)60))
```

```
*****
* 4. Plotting the results from the -margins- command
*****
use http://www.stata-press.com/data/r14/margex, clear
mlogit group i.sex##c.age

*****
* 4.1. Plotting the Adjusted Predictions
*****
margins i.sex,          at(age=(20(10)60))
marginsplot, yline(0)
marginsplot, by(sex) yline(0)

*****
* 4.2 Plotting the marginal effect
*****
margins, dydx(i.sex) at(age=(20(10)60))
marginsplot, yline(0)

*****
* 5. A three-way interactions in multi-nomial logistic regression
*****
use http://www.stata-press.com/data/r14/margex, clear
mlogit outcome i.sex##c.age##c.c.distance

*****
* 5.1 Average Adjusted Prediction and Average Marginal Effect
*****
margins i.sex,
margins, dydx(i.sex)

*****
* 5.2 Adjusted Predictions and Marginal Effects at the Means
*****
margins i.sex,          atmeans
margins, dydx(i.sex) atmeans

*****
* 5.3 Adjusted Predictions and Marginal Effects at Representative values and
*****
margins i.sex,          at(age=(20(10)60) distance = (0(100)800))
margins, dydx(i.sex) at(age=(20(10)60) distance = (0(100)800))

log close
```