```
> plot(OwnPrice,Sales)
> plot(OtherPrice,Sales)
> plot(OwnPrice,OtherPrice)
> plot(Prices.lm$resid,sales1.lm$resid,xlab="Residuals from
OtherPrice on OwnPrice",ylab="Residuals from Sales on OwnPrice")
```

Multiple linear regression of Sales on OwnPrice and OtherPrice:

```
> sales.lm <- lm(Sales ~ OwnPrice + OtherPrice)
> sales.lm
Call:
lm(formula = Sales ~ OwnPrice + OtherPrice)

Coefficients:
 (Intercept)  OwnPrice OtherPrice
    115.7172 -97.65737   108.7999

Degrees of freedom: 100 total; 97 residual
Residual standard error: 28.41801
```

Simple linear regression of Sales on OwnPrice:

```
> sales1.lm <- lm(Sales ~ OwnPrice)
> sales1.lm
Call:
lm(formula = Sales ~ OwnPrice)

Coefficients:
 (Intercept) OwnPrice
    211.1646 63.71296

Degrees of freedom: 100 total; 98 residual
Residual standard error: 223.4006
```

Understanding the effect of adding one predictor: Simple linear regression of OtherPrice on OwnPrice.

```
> Prices.lm<-lm(OtherPrice ~ OwnPrice)
> Prices.lm
Call:
lm(formula = OtherPrice ~ OwnPrice)

Coefficients:
```

```
 (Intercept) OwnPrice
   0.8772747 1.483184

Degrees of freedom: 100 total; 98 residual
Residual standard error: 2.036807
```

Just checking that the instructor is correct! Regress the residuals.

```
> lm(sales1.lm$resid ~ Prices.lm$resid)
Call:
lm(formula = sales1.lm$resid ~ Prices.lm$resid)

Coefficients:
  (Intercept) Prices.lm$resid
 -2.01794e-14        108.7999

Degrees of freedom: 100 total; 98 residual
Residual standard error: 28.27265
```

Then the slope is $\beta_2 = 108.8$, the coefficient associated with OtherPrice in the multiple regression.

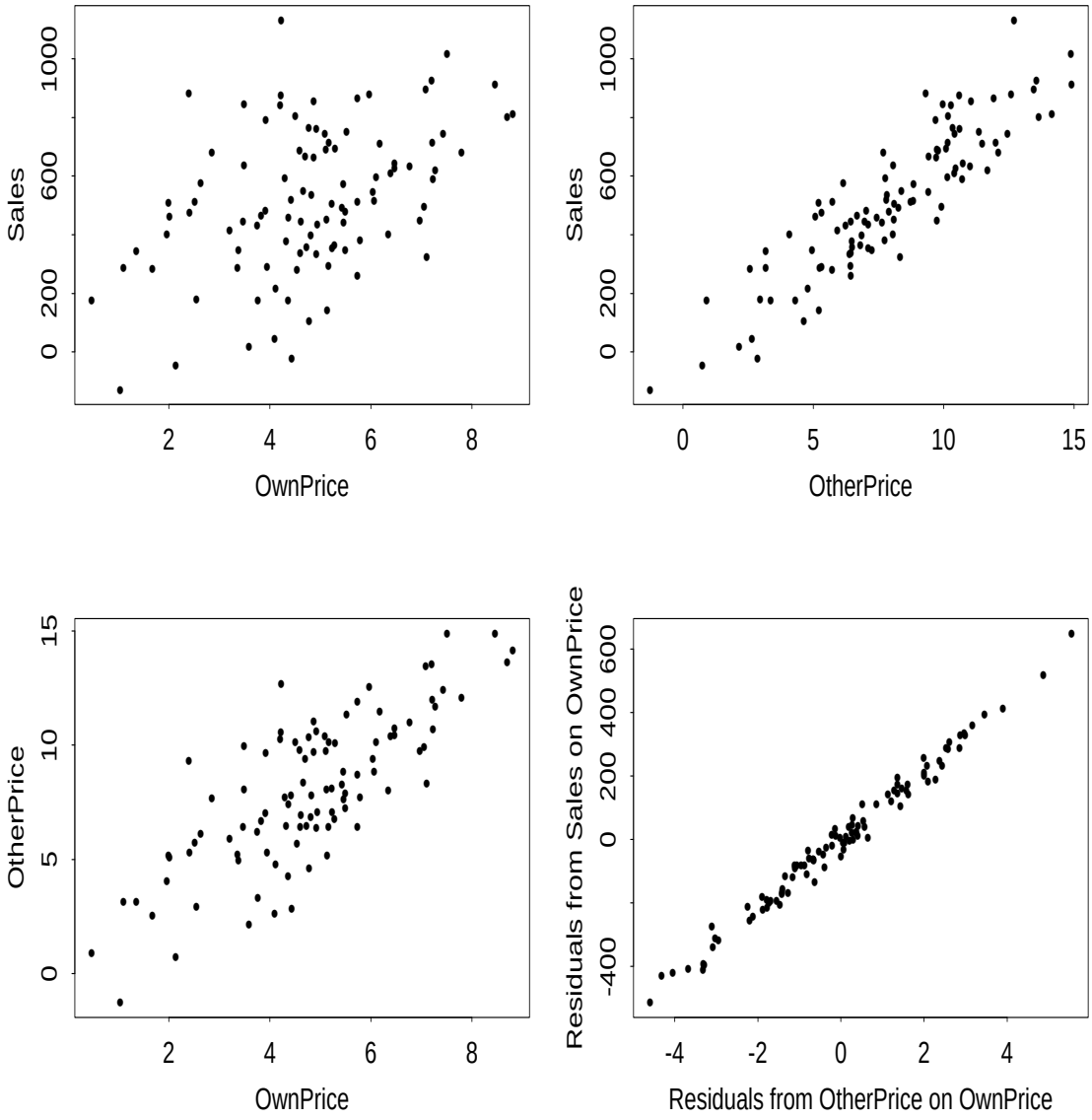

Figure 1: Explaining multiple regression