



R Code for Examples in the book
"Statistics: The Art and Science of Learning from Data"
 by Agresti, Franklin and Klingenberg, 5th edition

Chapter 13

Example 9: House Selling Price – Plotting Residuals

Reading in data

```
houses <-  
read.csv(file='https://raw.githubusercontent.com/artofstat/data/master/Chapter13/house_selling_prices_or.csv')
```

Fitting in multiple regression model

```
linReg <- lm(HP.in.thousands ~ House.Size + Bedrooms, data = houses)  
linReg  
  
##  
## Call:  
## lm(formula = HP.in.thousands ~ House.Size + Bedrooms, data = houses)  
##  
## Coefficients:  
## (Intercept)   House.Size   Bedrooms  
##    60.10214     0.06298    15.17041
```

To obtain standardized residuals

```
mystdres <- rstandard(linReg)  
head(mystdres)  
  
##           1           2           3           4           5           6  
## 0.2643425 0.6441210 -1.6377349 0.1023211 -0.3326797 1.9403118
```

To plot standardized residuals against house size

```
plot(mystdres ~ houses$House.Size, pch = 16, col = 'darkblue',  
     main = 'Residual Versus House Size',  
     xlab = 'House Size', ylab = 'Standardized Residual',  
     xlim = c(0, 12000), ylim = c(-5, 5))
```

