



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 8: House Selling Price – Histogram of Standardized Residuals

Reading in data

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

Fitting in multiple regression model

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

To obtain standardized residuals

```
stdres <- rstandard(lin.reg)  
head(stdres)  
  
##           1           2           3           4           5           6  
## 0.2643425 0.6441210 -1.6377349 0.1023211 -0.3326797 1.9403118
```

To create a histogram of the standardized residuals

```
hist(stdres, breaks = 20, col = 'tan', main = 'Histogram', xaxt = 'n',  
     xlab = 'Standardized Residual', ylab = 'Frequency')  
axis(1, at = seq(-5, 6, by = 1))
```

