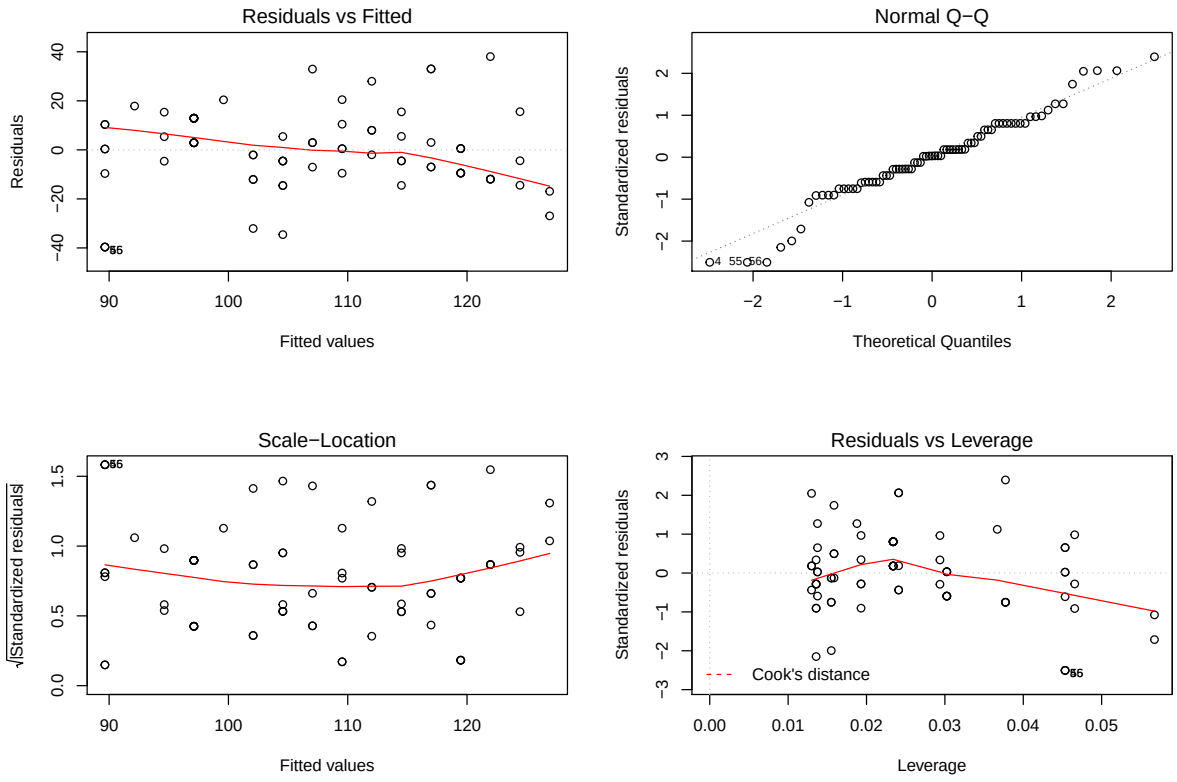
STAT 217: Influential Points (in class 3/23)

```
cereal.fit <- lm(calories~sugar, data = cereal)
summary(cereal.fit)
```

```
##
## Call:
## lm(formula = calories ~ sugar, data = cereal)
##
## Residuals:
##    Min     1Q Median     3Q    Max
## -39.65  -9.47   0.47  10.47  38.05
##
## Coefficients:
##             Estimate Std. Error t value Pr(>|t|)
## (Intercept)    89.65       3.45   26.00  < 2e-16 ***
## sugar           2.48       0.42    5.92  9.2e-08 ***
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 16.2 on 75 degrees of freedom
## Multiple R-squared:  0.318,Adjusted R-squared:  0.309
## F-statistic:   35 on 1 and 75 DF,  p-value: 9.17e-08
```

```
par(mfrow=c(2,2))
plot(cereal.fit)
```



```r
lm.tread <- lm(TreadMillOx~RunTime, data=treadmill)
summary(lm.tread)

##
## Call:
## lm(formula = TreadMillOx ~ RunTime, data = treadmill)
##
## Residuals:
##    Min     1Q Median     3Q    Max
##  -6.67  -2.65  -1.20   1.41  25.77
##
## Coefficients:
##             Estimate Std. Error t value Pr(>|t|)
## (Intercept)    68.54       7.66    8.95  5.6e-10 ***
## RunTime        -1.92       0.71   -2.70    0.011 *
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 5.82 on 30 degrees of freedom
## Multiple R-squared:  0.196,Adjusted R-squared:  0.169
## F-statistic: 7.31 on 1 and 30 DF,  p-value: 0.0112

par(mfrow=c(2,2))
plot(lm.tread)
```