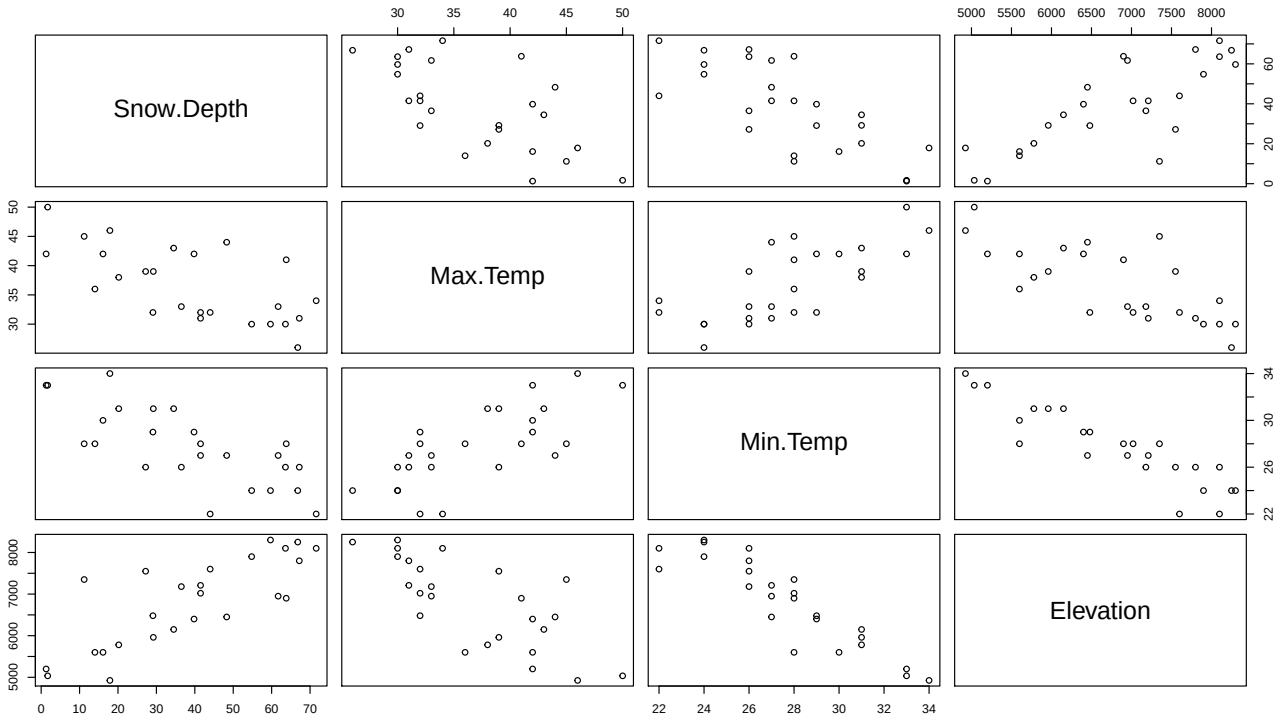
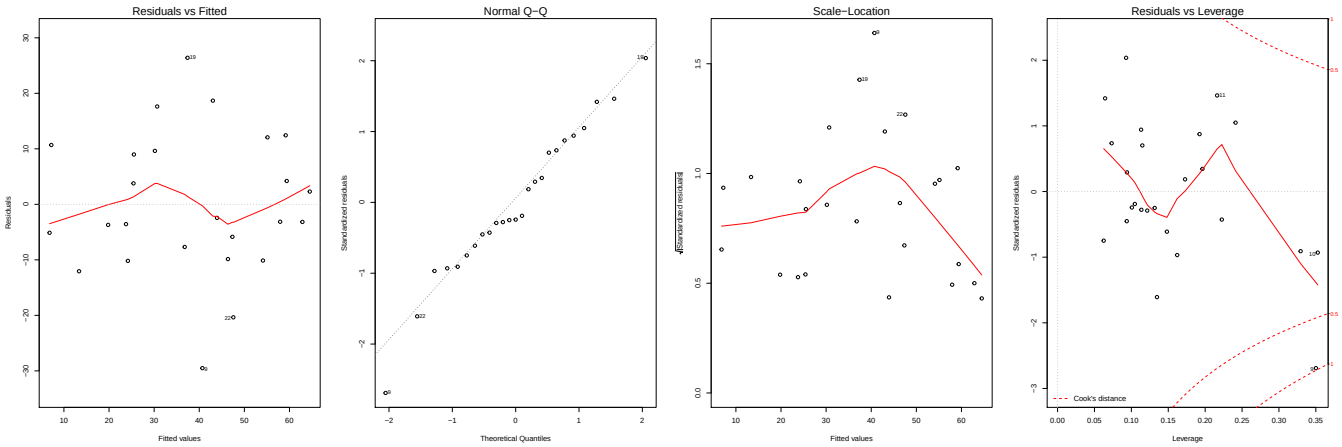
STAT 217: MLR Assumptions (in class 4/15)





```r
lm.snow <- lm(Snow.Depth~Max.Temp+Min.Temp+Elevation, data=snow)
summary(lm.snow)
```

```
##
## Call:
## lm(formula = Snow.Depth ~ Max.Temp + Min.Temp + Elevation, data = snow)
##
## Residuals:
##    Min     1Q Median     3Q    Max
## -29.51  -7.68  -3.14   9.63  26.39
##
## Coefficients:
##              Estimate Std. Error t value Pr(>|t|)
## (Intercept) -10.50653   99.61629   -0.11    0.917
## Max.Temp     -0.56189    0.67322   -0.83    0.413
## Min.Temp     -0.50497    2.04261   -0.25    0.807
## Elevation     0.01233    0.00654    1.89    0.073 .
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 13.6 on 21 degrees of freedom
## Multiple R-squared:  0.648,Adjusted R-squared:  0.598
## F-statistic: 12.9 on 3 and 21 DF,  p-value: 5.33e-05
```

```r
lm.snow2 <- lm(Snow.Depth~Elevation, data=snow)
summary(lm.snow2)
```

```
##
## Call:
## lm(formula = Snow.Depth ~ Elevation, data = snow)
##
## Residuals:
##    Min     1Q Median     3Q    Max
## -36.42  -5.13  -1.77   7.65  23.51
##
## Coefficients:
##              Estimate Std. Error t value Pr(>|t|)
## (Intercept) -72.00587   17.71293   -4.07  0.00048 ***
## Elevation     0.01628    0.00258    6.31  1.9e-06 ***
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 13.3 on 23 degrees of freedom
## Multiple R-squared:  0.634,Adjusted R-squared:  0.618
## F-statistic: 39.8 on 1 and 23 DF,  p-value: 1.93e-06
```

1. The following dataset contains the SAT verbal and SAT math scores of 1000 college graduates, as well as there college GPA.