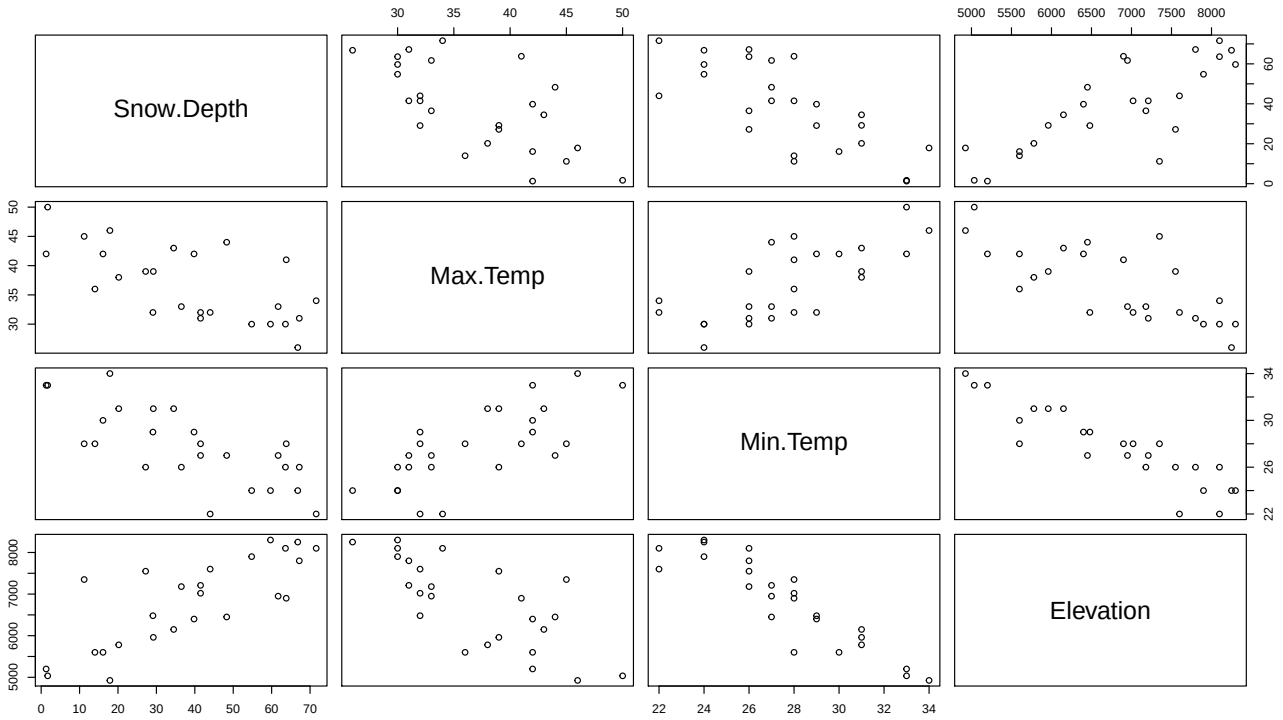
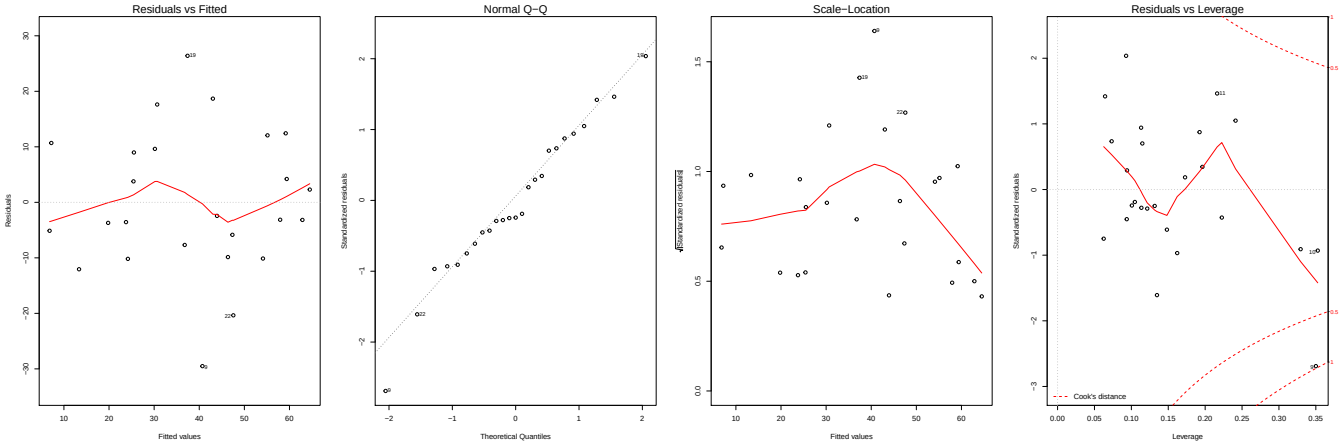
STAT 217: MLR Model and Assumptions (in class 11/9 and 11/13)





```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
## -29.508  -7.679  -3.139   9.627  26.394
##
## Coefficients:
##               Estimate Std. Error t value Pr(>|t|)
## (Intercept) -10.506529  99.616286  -0.105   0.9170
## Max.Temp     -0.561892   0.673219  -0.835   0.4133
## Min.Temp     -0.504970   2.042614  -0.247   0.8071
## Elevation     0.012332   0.006536   1.887   0.0731 .
## ---
## 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:  0.6485,Adjusted R-squared:  0.5983
## F-statistic: 12.91 on 3 and 21 DF,  p-value: 5.328e-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
## -36.416  -5.135  -1.767   7.645  23.508
##
## Coefficients:
##               Estimate Std. Error t value Pr(>|t|)
## (Intercept) -72.005873  17.712927  -4.065 0.000478 ***
## Elevation     0.016275   0.002579   6.311 1.93e-06 ***
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 13.27 on 23 degrees of freedom
## Multiple R-squared:  0.634,Adjusted R-squared:  0.618
## F-statistic: 39.83 on 1 and 23 DF,  p-value: 1.933e-06
```