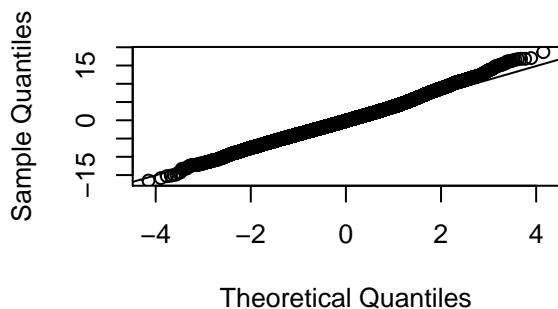
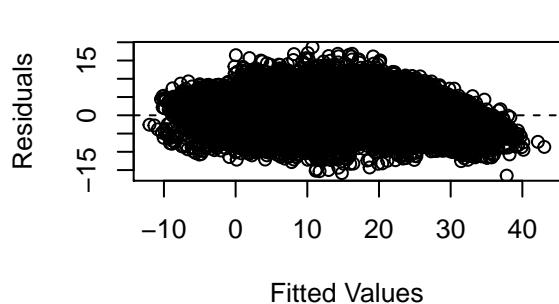
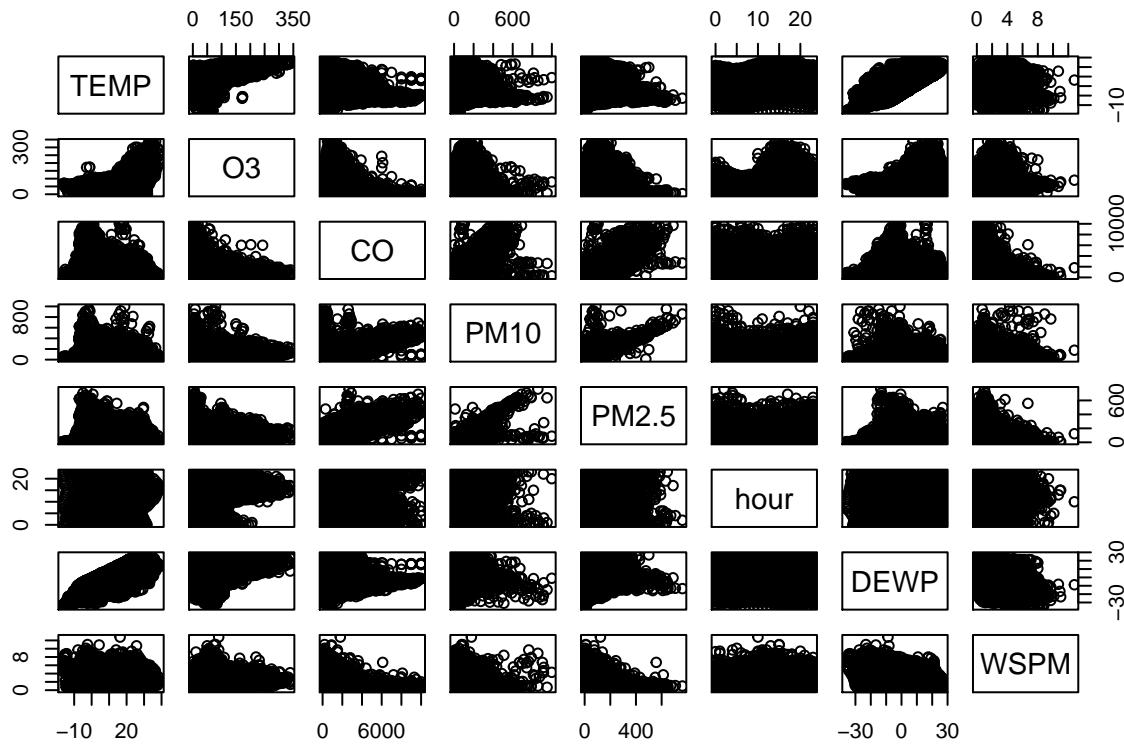


```
final.mod <- lm(TEMP ~ O3 + CO + PM10 + PM2.5 + hour + PRES + DEWP + WSPM)
e <- resid(final.mod)
yhat <- fitted(final.mod)
plot(yhat, e, xlab = 'Fitted Values', ylab = 'Residuals')
abline(h = 0, lty = 2)
qqnorm(e)
qqline(e)
```



```
#plots
pairs(~TEMP + O3 + CO + PM10 + PM2.5 + hour + DEWP + WSPM)
```



```
yeojohnson(airquality$O3)
```

```
## Standardized Yeo-Johnson Transformation with 30194 nonmissing obs.:
## Estimated statistics:
## - lambda = 0.2518773
## - mean (before standardization) = 5.893652
## - sd (before standardization) = 2.913063
```

```
yeojohnson(airquality$CO)
```

```
## Standardized Yeo-Johnson Transformation with 30194 nonmissing obs.:
## Estimated statistics:
## - lambda = 0.02382407
## - mean (before standardization) = 7.299665
## - sd (before standardization) = 1.029023
```

```
yeojohnson(airquality$PM10)
```

```
## Standardized Yeo-Johnson Transformation with 30194 nonmissing obs.:
## Estimated statistics:
## - lambda = 0.2124124
## - mean (before standardization) = 6.979073
## - sd (before standardization) = 2.430958
```

```
yeojohnson(airquality$PM2.5)
```

```
## Standardized Yeo-Johnson Transformation with 30194 nonmissing obs.:
## Estimated statistics:
## - lambda = 0.1361767
## - mean (before standardization) = 5.213355
## - sd (before standardization) = 1.875444
```

```

yeojohnson(airquality$hour)

## Standardized Yeo-Johnson Transformation with 30194 nonmissing obs.:
## Estimated statistics:
## - lambda = 0.773038
## - mean (before standardization) = 7.675282
## - sd (before standardization) = 4.027525

yeojohnson(airquality$PRES)

## Standardized Yeo-Johnson Transformation with 30194 nonmissing obs.:
## Estimated statistics:
## - lambda = -3.812891
## - mean (before standardization) = 0.2622682
## - sd (before standardization) = 3.433562e-14

yeojohnson(airquality$DEWP)

## Standardized Yeo-Johnson Transformation with 30194 nonmissing obs.:
## Estimated statistics:
## - lambda = 1.010154
## - mean (before standardization) = 1.778349
## - sd (before standardization) = 13.68319

yeojohnson(airquality$WSPM)

## Standardized Yeo-Johnson Transformation with 30194 nonmissing obs.:
## Estimated statistics:
## - lambda = -0.283969
## - mean (before standardization) = 0.8221697
## - sd (before standardization) = 0.3036485

yeojohnson(airquality$TEMP)

## Standardized Yeo-Johnson Transformation with 30194 nonmissing obs.:
## Estimated statistics:
## - lambda = 0.8819786
## - mean (before standardization) = 9.678786
## - sd (before standardization) = 8.968744

final2.lm <- lm(TEMP ~ log(O3) + log(CO) + log(PM10) + log(PM2.5) + hour + DEWP + WSPM)
pairs(~ TEMP + log(O3) + log(CO) + log(PM10) + log(PM2.5) + 1/PRES + DEWP + WSPM)

```