4.8 a. Done on next page

b. Correlation Coefficient w/ outliers: 0.697
" " w/o " : 0.714
- The outliers increased the correlation, this is probably because they're closer to the best-fit line.

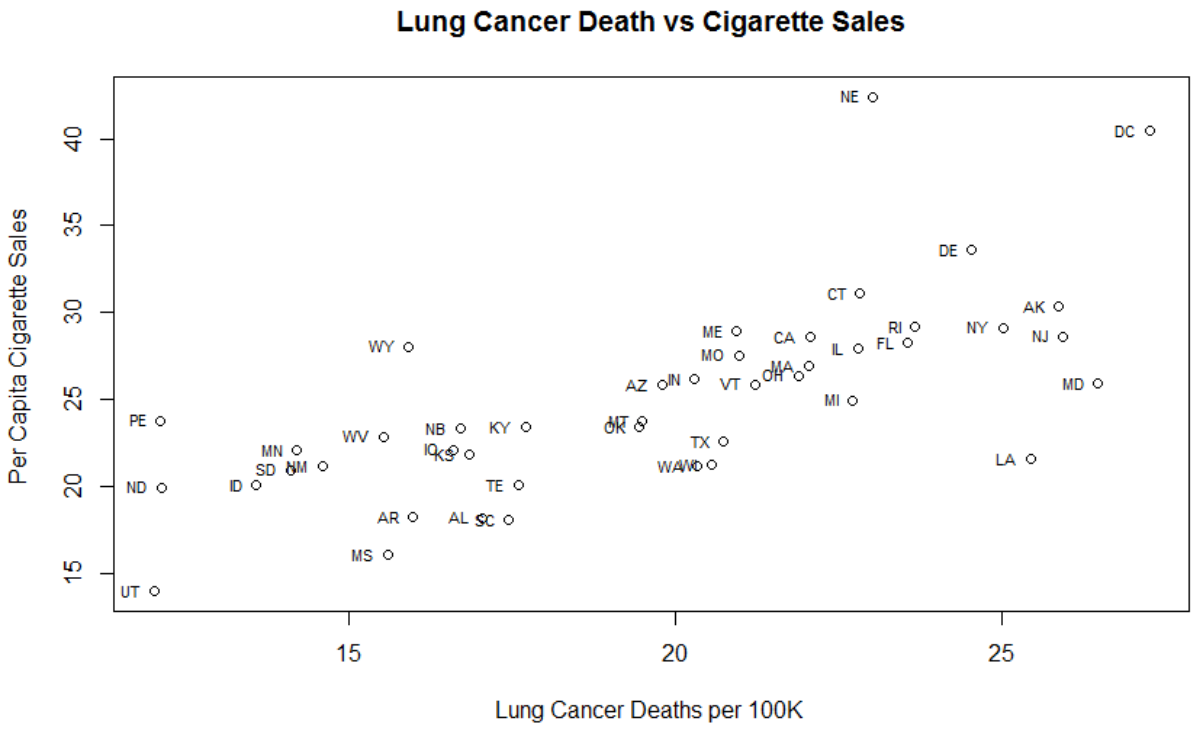
c. Correlation Coefficient w/ outliers: 0.704
" " w/o " : 0.608
- The outliers decreased correlation because they were inconsistent with the rest of the data.

d. Correlation Coefficient w/ outliers: 0.487
" " w/o " : 0.579
- The outliers increased the correlation since they were closer to the best-fit line.

e. Correlation Coefficient w/ outliers: -0.068
" " w/o " : -0.101
- The outliers ~~decreased~~ increased the correlation's magnitude, meaning that they were closer to the best-fit line.

f. No, because correlation does not indicate causation alone. Thus, it is indeterminate whether smoking actually causes lung cancer.

g. No, because correlation doesn't mean causation we cannot state that smoking cures lung cancer even if they are inversely correlated.


Lung Cancer Death vs Cigarette Sales
Per Capita Cigarette Sales
Lung Cancer Deaths per 100K
15
20
25
30
35
40
NE
DC
DE
CT
AK
RI
NY
ME
CA
FL
NJ
WY
MO
IL
MA
OH
AZ
IN
VT
MD
MI
PE
WV
NB
KY
OK
TX
MN
IO
KS
SD
NM
WA
LA
ND
ID
TE
AR
AL
SC
MS
UT