**Assignment 3 by Yewei Sun**

**Submit for grading: 4.20, 4.26, 4.28.**

4.20(a) 17

tabulate AGE1 //4.20(a)

4.20(b) 18.5%

4.20(c) 40 years old is below the median in this data set. By running:

summarize AGE1, detail //4.20(c)

we can know that the median in this data set is 48, which is bigger than 40.

4.20(d) 40 years old is below the mean. It’s below the mean by 1.07 standard deviation (sd) since sd = 8.425 in this data set.

4.20(e) 10

4.20(f)

by SEX, sort: tab AGE1 //4.20(f)

five outliers among men and five among women

4.20(g)

gen BIRTHYR = 1956 - AGE1 //4.20(g)

4.20(h)

summarize BIRTHYR, detail //4.20(h)

According to the output, the median of this variable is 1908

4.20(i) 8.4254

4.26(a)

gen apoffyn = 0

replace apoffyn=1 if apoffer !=0 & apoffer !=.

replace apoffyn=. if apoffer==.

codebook apoffyn

capture label define yesno 1"yes"0"no"

label value apoffyn yesno//4.26(a)

4.26(b) 128

codebook apoffyn //4.26(b)

4.26(c)

summarize apoffyn, detail //4.26(c)

the mean of “apoffyn” is 0.7293, which means around 72.93% schools in this data set provide AP courses to their students

4.28(a)

gen BMIDIFF = BMI3-BMI1

gen CIGPDIFF=CIGPDAY3 - CIGPDAY1 //4.28(a)

304 \* 0.4474 = 136.0096, so around 136 people lose weight

304 \* 0.2434 = 73.99, so around 74 people reduce their cigarette smoking

4.28(b)

codebook ANYCHD4

by ANYCHD4, sort: summarize BMIDIFF //4.28(b)

the mean change in BMI who experienced a CHD is -0.28, and the mean change in BMI who do not experience a CHD is 0.34. So those who experienced a CHD event in their life lose weight and the those who do not gain weight.

4.28(c)

by ANYCHD4, sort: summarize CIGPDIFF //4.28(c)

the mean change in cigarette smoking who experienced a CHD is -3.01, and the mean change in cigarette smoking who do not experience a CHD is -1.2. So both two group will reduce their amount of cigarette smoking when they grow old, and those who experienced a CHD attack tend to have a higher reduce rate than those who do not.