

Intro to Computational Statistics - Homework 2

Vandana Thannir

March 10rd, 2021

1 Problem 2

1.1 Part A

Output of Table 1.1

Obs	YEARS	TOTAL	EXPORTS	IMPORTS
1	1955	3.15	1.41	1.73
2	1956	3.21	1.65	1.56
3	1957	3.10	1.60	1.51
4	1958	3.87	1.98	1.89
5	1959	4.38	2.26	2.12
6	1960	3.81	1.86	1.95
7	1961	2.94	1.49	1.45
8	1962	2.66	1.49	1.17
9	1963	2.92	1.65	1.27
10	1964	3.46	1.92	1.55

1.2 Part B

Output of Table 1.2

Obs	TradeBalance	YEARS
1	-0.32	1955
2	0.09	1956
3	0.09	1957
4	0.09	1958
5	0.14	1959

1.3 Part C

Mean for 50s : 0.018

Standard Deviation for 50s : 0.19

Mean for 80s : -0.088

Standard Deviation for 80s : 4.28

2 Problem 3

2.1 Part A

Output of Table 2.1

Obs	ID	Type	Days	Cost
1	ID001	work	0	85
2	ID007	work	0	165
3	ID009	work	5	205
4	ID012	work	0	125
5	ID029	work	5	210
6	ID036	work	5	125
7	ID045	work	13	285
8	ID055	work	10	425
9	ID069	work	2	144
10	ID090	work	2	125

2.2 Part B

Output of Table 2.2

Obs	ID	Type	Days	Cost
1	ID001	work	0	130.90
2	ID007	work	0	254.10
3	ID009	work	5	315.70
4	ID012	work	0	192.50
5	ID029	work	5	323.40
6	ID036	work	5	192.50
7	ID045	work	13	438.90
8	ID055	work	10	654.50
9	ID069	work	2	221.76
10	ID090	work	2	192.50

2.3 Part C

Output of Table 2.3

Obs	ID	Days
1	ID045	13
2	ID055	10
3	ID009	5
4	ID029	5
5	ID036	5
6	ID069	2
7	ID090	2
8	ID001	0
9	ID007	0
10	ID012	0

3 Appendix with Code

```
FILENAME china 'downloads/china.dat';
DATA china;
    INFILE china obs=10;
    INPUT YEARS TOTAL EXPORTS IMPORTS;
RUN;

PROC PRINT DATA=china ;
RUN;
DATA china2 ;
    SET china ;
    TradeBalance = EXPORTS - IMPORTS;
    IF 1950<=YEARS<1960 THEN OUTPUT china2 ;
RUN;
PROC PRINT data = china2 ;
    var TradeBalance Years ;
RUN;
DATA china3 ;
    SET china2 ;
    IF 1950<=YEARS<1960 THEN OUTPUT china3 ;
    IF 1980<=YEARS<1990 THEN OUTPUT china3 ;
RUN;
PROC means DATA = china3 mean;
    var TradeBalance ;
RUN;
PROC means DATA = china3 STD;
    var TradeBalance ;
RUN;

FILENAME handinj 'downloads/handinj.dat';
```

```

DATA handinj ;
    INFILE handinj obs=10;
    INPUT ID$ Type $ Days Cost;
RUN;
PROC PRINT DATA=handinj ;
RUN;

DATA handinj2 ;
    SET handinj;
    COST = 1.54 * COST;
RUN;
PROC PRINT data = handinj2 ;
RUN;

DATA handinj3 ;
    If type = 'sport' then output handinj3 ;
RUN;
PROC SORT DATA = handinj OUT = handinj3 ;
    BY DESCENDING Days;
RUN;
PROC PRINT DATA = handinj3 ;
    var ID DAYS;
RUN;

```