

SAS Program for Elliott Problems

*This program will illustrate the SAS code to solve the Problems in Elliott;

*This part of the program will answer question 1.2;

*This statement will input the data using the keyword cards;

```
data problem1;
  input ph time temp;
  cards;
    4.5 20 125
    4.1 22 133
    4.8 18 149
    4.0 26 120
    5.0 25 120
    6.0 21 138
  ;
```

run;

*This step will print temperature and ph, in that order;

```
proc print data=problem1;
  var temp ph;
  title1 'Elliott Question 1 2';
  title2 'Temperature and ph';
run;
```

*This part of the program will answer question 1.4;

*This step will read in the data using the keyword cards and identify character variables;

```
data problem2;
  input size $ color $ price shipping;
  cards;
    Large Red 18.97 0.25
    Medium Blue 24.68 1.10
    X-Large Black 29.99 1.75
    Small Orange 15.89 0.90
  ;
```

run;

*This step will print the variables color, size, and price, in that order;

```
proc print data=problem2;
  var color size price;
  title1 'Elliott Question 1 4';
  title2 'Color, Size, Price';
run;
```

run;

SAS Program for Elliot Problems.

/****** This part of the program answers question 2.2 *****/

NOTE: the above alternative method for entering comment lines

```
libname rys 'G:\classes\216';
filename china 'G:\classes\216\china#1.dat';
data chin;
infile china;
input yr 1-4 net 6-10 export 12-16 import 18-22; run;
data chin;
set chin; trdbal = export-import;
run;
data chin; set chin;
if yr le '1959' then decade = 'fifties';
else if yr ge '1960' and yr le '1969' then decade = 'sixties';
else if yr ge '1970' and yr le '1979' then decade = 'seventies';
else if yr ge '1980' and yr le '1989' then decade = 'eighties';
run;
proc sort data=chin; by decade; run;
proc print data=chin; by decade; run;

data chin1; set chin;
if yr le '1979' then delete; run;
proc print data=chin1; run;
```

/****** This part of the program will answer question 2.4 *****/

```
filename smpl 'G:\classes\216\handinj.dat';
data temp;
infile smpl;
input id $ 1-5 injtype $ 7-11 dyslost 13-14 cost 16-19;
run;

data work.temp; set work.temp;
us_doll = cost*1.54;
run;

proc sort data=work.temp; by dyslost descending us_doll; run;

proc print data=temp; var injtype; by dyslost; run;
```

Output For Questions in Elliott

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Temperature and ph

OBS	TEMP	PH
1	125	4.5
2	133	4.1
3	149	4.8
4	120	4.0
5	120	5.0
6	138	6.0

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Color, Size, Price

OBS	COLOR	SIZE	PRICE
1	Red	Large	18.97
2	Blue	Medium	24.68
3	Black	X-Large	29.99
4	Orange	Small	15.89

Output for Questions in Elliott

Question 2.2

The SAS System

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----- DECADE=eightie -----

OBS	YR	TOTAL	EXPORT	IMPORT	TRDBAL
1	1980	37.82	18.27	19.55	-1.28
2	1981	40.38	20.89	19.48	1.41
3	1982	39.30	21.82	17.48	4.34
4	1983	40.73	22.20	18.53	3.67
5	1984	49.77	24.42	25.36	-0.94
6	1985	60.25	25.92	34.33	-8.41
7	1986	60.10	27.01	33.08	-6.07
8	1987	68.11	34.71	33.40	1.31
9	1988	80.49	40.64	39.85	0.79
10	1989	82.58	43.44	39.14	4.30

----- DECADE=fifties -----

OBS	YR	TOTAL	EXPORT	IMPORT	TRDBAL
11	1955	3.15	1.41	1.73	-0.32
12	1956	3.21	1.65	1.56	0.09
13	1957	3.10	1.60	1.51	0.09
14	1958	3.87	1.98	1.89	0.09
15	1959	4.38	2.26	2.12	0.14

----- DECADE=seventi -----

OBS	YR	TOTAL	EXPORT	IMPORT	TRDBAL
16	1970	4.59	2.26	2.33	-0.07
17	1971	4.84	2.64	2.21	0.43
18	1972	6.30	3.44	2.86	0.58
19	1973	10.98	5.82	5.16	0.66
20	1974	14.57	6.95	7.62	-0.67
21	1975	14.75	7.26	7.49	-0.23
22	1976	13.43	6.86	6.58	0.28
23	1977	14.80	7.59	7.21	0.38
24	1978	20.64	9.75	10.89	-1.14
25	1979	29.33	13.66	15.68	-2.02

----- DECADE=sixties -----

OBS	YR	TOTAL	EXPORT	IMPORT	TRDBAL
-----	----	-------	--------	--------	--------

26	1960	3.81	1.86	1.95	-0.09
27	1961	2.94	1.49	1.45	0.04
28	1962	2.66	1.49	1.17	0.32
29	1963	2.92	1.65	1.27	0.38
30	1964	3.46	1.92	1.55	0.37
31	1965	4.25	2.23	2.02	0.21
32	1966	4.61	2.37	2.25	0.12
33	1967	4.16	2.14	2.02	0.12
34	1968	4.05	2.10	1.95	0.15
35	1969	4.03	2.20	1.83	0.37

Question 2.4

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OBS	ID	INJTYPE	DYSLOST	COST	US_DOLL
1	ID158	sport	0	1210	1863.40
2	ID184	sport	0	245	377.30
3	ID122	work	0	205	315.70
4	ID007	work	0	165	254.10
5	ID099	sport	0	165	254.10
6	ID012	work	0	125	192.50
7	ID183	work	0	125	192.50
8	ID182	sport	0	125	192.50
9	ID113	work	0	105	161.70
10	ID001	work	0	85	130.90
11	ID092	work	0	85	130.90
12	ID098	work	0	85	130.90
13	ID018	sport	0	85	130.90
14	ID074	sport	0	85	130.90
15	ID091	sport	0	85	130.90
16	ID109	sport	0	85	130.90
17	ID127	sport	0	85	130.90
18	ID143	sport	0	85	130.90
19	ID150	sport	0	85	130.90
20	ID181	sport	0	85	130.90
21	ID195	work	1	116	178.64
22	ID069	work	2	144	221.76
23	ID090	work	2	125	192.50
24	ID136	work	2	125	192.50
25	ID058	sport	4	309	475.86
26	ID197	sport	4	245	377.30
27	ID059	sport	5	325	500.50
28	ID114	sport	5	295	454.30
29	ID022	sport	5	255	392.70
30	ID029	work	5	210	323.40
31	ID009	work	5	205	315.70
32	ID036	work	5	125	192.50
33	ID157	sport	6	490	754.60
34	ID055	work	10	425	654.50
35	ID045	work	13	285	438.90
36	ID119	work	30	1965	3026.10
37	ID066	sport	30	925	1424.50
38	ID186	work	64	2951	4544.54

OBS	INJTYPE	DYSLOST
1	sport	0
2	sport	0
3	work	0
4	work	0
5	sport	0
6	work	0
7	work	0
8	sport	0
9	work	0
10	work	0
11	work	0
12	work	0
13	sport	0
14	sport	0
15	sport	0
16	sport	0
17	sport	0
18	sport	0
19	sport	0
20	sport	0
21	work	1
22	work	2
23	work	2
24	work	2
25	sport	4
26	sport	4
27	sport	5
28	sport	5
29	sport	5
30	work	5
31	work	5
32	work	5
33	sport	6
34	work	10
35	work	13
36	work	30
37	sport	30
38	work	64

ANSWER KEY FOR ECON 294 P.S. #2

SAS Code for Econ 294 Census 90 Questions

```
***** This program will answer Econ 294 problem set #2 *****/
libname rys 'J:\classes\216';
libname sassy 'G:\clearly\';

/**** Note I am creating a duplicate copy of the data set coming from J going to G
*****/
data sassy.census90;
set rys.census90; run;

proc means data=sassy.census90;
    var age;
    title1 'Econ 294 problem #2';
    title2 'Means table of Individual Ages';
run;

proc freq data=sassy.census90;
tables division;
title1 'Econ 294 problem #3';
title2 'Percent of Sample in each division';
run;

/***** To create a temporary data set in the WORK directory to analyze marital
status*****/

data marry;
set sassy.census90;
if marital=0 then marry=1;
else marry=0;
run;

/***** Taking the average value of new married variable for both men and women*****/

proc means data=marry;
var marry;
where female=1 and 20 <= age <= 35;
title 'Average Value of marry for women ages 20 to 35';
run;

proc means data=marry;
var marry;
where female=0 and 20 <= age <= 35;
title 'Average Value of Marry for men ages 20 to 35';
run;
```

Output for econ 294 Census 90 Questions

#(1) Calculate and report sample means for all variables. Use proc means:
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Variable	N	Mean	Std Dev	Minimum	Maximum
RACE	1070	4.9570093	29.0669371	1.0000000	326.0000000
HISPANIC	1070	9.7532710	46.8357884	0	300.0000000
DIVISION	1070	4.9130841	2.5396605	1.0000000	9.0000000

AGE	1070	38.9448598	13.0580394	16.0000000	84.0000000
MARITAL	1070	1.2205607	1.6984965	0	4.0000000
CITIZEN	1070	0.3439252	1.0477092	0	4.0000000
IMMIGR	1070	0.5560748	1.8125783	0	10.0000000
HIGRADE	1070	13.1644860	2.8640951	0	20.0000000
ENGLISH	1070	0.2037383	0.6485106	0	4.0000000
WEEK89	1070	47.2700935	8.5924752	20.0000000	52.0000000
HOUR89	1070	40.7289720	10.6486274	15.0000000	99.0000000
EARN	1070	23994.65	24157.55	0	315496.00
FEMALE	1070	0.4392523	0.4965281	0	1.0000000
CHILDREN	1070	0.8691589	1.1127639	0	5.0000000
IND	1070	9.1158879	4.0195535	1.0000000	15.0000000
OCC	1070	3.7654206	1.9967515	0	7.0000000

#(2) What is the age of the oldest and youngest person in the census90 data set? Use proc freq.

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Analysis Variable : AGE

N	Mean	Std Dev	Minimum	Maximum
1070	38.9448598	13.0580394	16.0000000	84.0000000

#(2) How many individuals are the maximum and minimum age? You can either use proc univariate or proc freq.

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AGE	Frequency	Percent	Cumulative Frequency	Cumulative Percent
16	1	0.1	1	0.1
84	1	0.1	1070	100.0

#(3) What percentage of the population sample live in the pacific division, or division=9? How many observations does this division represent?

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DIVISION	Frequency(Obs)	Percent	Cumulative Frequency	Cumulative Percent
1	61	5.7	61	5.7
2	168	15.7	229	21.4
3	179	16.7	408	38.1
4	79	7.4	487	45.5
5	199	18.6	686	64.1
6	67	6.3	753	70.4
7	91	8.5	844	78.9
8	61	5.7	905	84.6
9	165	<u>15.4</u>	1070	100.0

#(4) The sample data set was created and means was used to obtain the sample average of the new dummy variable for marital status of men and women.

For the women

Average Value of marry for women ages 20 to 35

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Analysis Variable : MARRY

N	Mean	Std Dev	Minimum	Maximum
205	<u>0.5219512</u>	0.5007407	0	1.0000000

The Sample average probability of men in the same age group.

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Analysis Variable : MARRY

N	Mean	Std Dev	Minimum	Maximum
246	<u>0.5162602</u>	0.5007544	0	1.0000000