Lab 6 *Some of these problems may be more challenging than others. Please feel free to work with others, attend office hours, or post on the course discussion forum if you need help. While collaboration with other students is encouraged, each student is responsible for submitting his or her own work. This assignment should be submitted in one well-commented SAS program. For any questions that require a written answer, do so in the SAS comments. Be sure to re-name the uploaded SAS scripts according to the naming convention* `LastnameFirstinitial_Lab#.sas` (*e.g.,* `PileggiS_Lab6.sas`).

`name`	Name of student
`bills`	Amount spend monthly on bills ($)
`reside`	If a student resides on or off campus
`status`	Year at Cal Poly
`mile`	Time to run the mile
`bday`	Date of birth
`pronoun`	gender pronoun 1 = he/him/his 2 = she/her/hers 3 = they/them/theirs

1. Utilize the instream data technique to create temporary SAS data set called `class` that imports the values below *exactly* as shown according to the names listed above. Print the data set and verify that your output matches the output shown.

Data

```
Bob $343.26 on 1st 8:45 7-may-1999 1
Mary $201.83 on 1st 7:11 28-jun-2000 2
Susan $345.89 off 2nd 6:52 17-dec-2001 2
Lex $150.01 off 3rd 8:16 23-apr-2000 3
Harry $300.65 off 4th 9:38 14-sep-2001 1
Sally $270.94 on 2nd 9:29 11-feb-1998 3
Mike $180.82 off 4th 8:56 26-nov-2001 1
```

Data

Obs	name	bills	reside	status	mile	bday	pronoun
1	Bob	343.26	on	1st	31500	14371	1
2	Mary	201.83	on	1st	25860	14789	2
3	Susan	345.89	off	2nd	24720	15326	2
4	Lex	150.01	off	3rd	29760	14723	3
5	Harry	300.65	off	4th	34680	15232	1
6	Sally	270.94	on	2nd	34140	13921	3
7	Mike	180.82	off	4th	32160	15305	1

2. Utlize PROC FREQ on `reside status pronoun`, and PROC MEANS on `bills mile bday`; further verify that your output is an exact match to that shown below.

The FREQ Procedure

reside	Frequency	Percent	Cumulative Frequency	Cumulative Percent
off	4	57.14	4	57.14
on	3	42.86	7	100.00

status	Frequency	Percent	Cumulative Frequency	Cumulative Percent
1st	2	28.57	2	28.57
2nd	2	28.57	4	57.14
3rd	1	14.29	5	71.43
4th	2	28.57	7	100.00

pronoun	Frequency	Percent	Cumulative Frequency	Cumulative Percent
1	3	42.86	3	42.86
2	2	28.57	5	71.43
3	2	28.57	7	100.00

The MEANS Procedure

Variable	N	Mean	Std Dev	Minimum	Maximum
bills	7	256.2000000	79.3004489	150.0100000	345.8900000
mile	7	30402.86	3870.77	24720.00	34680.00
bday	7	14809.57	529.2157270	13921.00	15326.00

3. Create a temporary data set called `class2` that copies `class`. In this temporary data set, create three new variables that represent the day, month, and year that the student was born. Your output should match that shown below. Use `class2` for the remaining exercises.

Obs	name	bills	reside	status	mile	bday	pronoun	day	month	year
1	Bob	343.26	on	1st	31500	14371	1	7	5	1999
2	Mary	201.83	on	1st	25860	14789	2	28	6	2000
3	Susan	345.89	off	2nd	24720	15326	2	17	12	2001
4	Lex	150.01	off	3rd	29760	14723	3	23	4	2000
5	Harry	300.65	off	4th	34680	15232	1	14	9	2001
6	Sally	270.94	on	2nd	34140	13921	3	11	2	1998
7	Mike	180.82	off	4th	32160	15305	1	26	11	2001

4. Print the values of `mile bday` for Bob formatted as shown below. In a comment in

your SAS code, provide an interpretation of Bill's `mile` and `bday`.

Obs	name	mile	bday
1	Bob	31,500	14,371

5. Print the data as exactly as shown below using built-in SAS formats.

Obs	Name	Monthly bills ($)	Residence	Year on campus	Time to complete mile (min)	Date of birth	Gender pronoun	Day of birth month	Month of birth year	Birth year
1	Bob	$343.26	on	1st	8:45	07MAY1999	1	7	5	1999
2	Mary	$201.83	on	1st	7:11	28JUN2000	2	28	6	2000
3	Susan	$345.89	off	2nd	6:52	17DEC2001	2	17	12	2001
4	Lex	$150.01	off	3rd	8:16	23APR2000	3	23	4	2000
5	Harry	$300.65	off	4th	9:38	14SEP2001	1	14	9	2001
6	Sally	$270.94	on	2nd	9:29	11FEB1998	3	11	2	1998
7	Mike	$180.82	off	4th	8:56	26NOV2001	1	26	11	2001

6. Create your own formats for the variables `pronoun reside month`. Pronoun values of 1, 2, and 3 should be displayed according to the data dictionary at the beginning of the assignment. Campus should be displayed as "On Campus" and "Off Campus". Lastly, the month values should be displayed as quarter such that individuals born Jan, Feb, Mar are in the "1st Quarter", etc. Print the data as exactly as shown below using the built-in SAS formats from the previous question and your newly created SAS formats. (**Nothing** should be done in a DATA step.)

Obs	Name	Monthly bills ($)	Residence	Year on campus	Time to complete mile (min)	Date of birth	Gender pronoun	Day of birth month	Month of birth year	Birth year
1	Bob	$343.26	On Campus	1st	8:45	07MAY1999	he/him/his	7	2nd Quarter	1999
2	Mary	$201.83	On Campus	1st	7:11	28JUN2000	she/her/hers	28	2nd Quarter	2000
3	Susan	$345.89	Off Campus	2nd	6:52	17DEC2001	she/her/hers	17	4th Quarter	2001
4	Lex	$150.01	Off Campus	3rd	8:16	23APR2000	they/them/theirs	23	2nd Quarter	2000
5	Harry	$300.65	Off Campus	4th	9:38	14SEP2001	he/him/his	14	3rd Quarter	2001
6	Sally	$270.94	On Campus	2nd	9:29	11FEB1998	they/them/theirs	11	1st Quarter	1998
7	Mike	$180.82	Off Campus	4th	8:56	26NOV2001	he/him/his	26	4th Quarter	2001