```
ods pdf file = '/home/u61979420/section2.pdf';
/* la: create a permanent library PSTAT130*/
libname PSTAT130 '/home/u61979420';
/* 1b: print all observations.
   there are 30 observations and 6 variables. */
proc print data = PSTAT130.passngrs;
run;
/* 2a: print flights to seattle only */
proc print data = PSTAT130.passngrs;
 where Dest = 'SEA':
run;
/* 2b: Print only the flights to Seattle with at least 120
EClass passengers but fewer than 15 BClass passengers. */
proc print data = PSTAT130.passngrs;
  where Dest = 'SEA' and EClass >= 120 and BClass < 15;
run;
/* 2c: Print only the variables FlightID, Depart, FClass, BClass, and EClass.*/
proc print data = PSTAT130.passngrs;
var FlightID Depart FClass BClass EClass;
run;
```

```
/* 3a: Print only the variables FlightID, Depart, FClass, BClass, and EClass.*/
proc print data = PSTAT130.passngrs;
var FlightID Depart FClass BClass EClass;
run;
/* 3b: Add formats to (a) such that Depart has the form of "MM/DD/YYYY"
and FClass, BClass, and EClass has the form of commas with one decimal point. */
proc print data = PSTAT130.passngrs;
  format FClass BCLass ECLass comma10.1
 Depart mmddyy10.;
run;
/* 3c: By using the LABEL statement, print the descriptions of variables as following */
proc print data = PSTAT130.passngrs label;
  label Dest = 'Destination'
 Depart = 'Departure Date'
 FClass = 'First Class'
 BClass = 'Business Class'
 EClass = 'Economy Class';
run;
ods pdf close;
```

| - | =" 1 | | | 50 1 | 5.01 | =61 |
|-----|----------|------|--------|-------------|--------|--------|
| Obs | FlightID | Dest | Depart | FClass | BClass | EClass |
| 1 | IA01802 | SEA | 15101 | 10 | 9 | 132 |
| 2 | IA01804 | SEA | 15101 | 11 | 12 | 111 |
| 6 | IA01802 | SEA | 15102 | 12 | 11 | 126 |
| 7 | IA01804 | SEA | 15102 | 12 | 8 | 119 |
| 10 | IA01802 | SEA | 15103 | 12 | 13 | 115 |
| 11 | IA01804 | SEA | 15103 | 12 | 12 | 136 |
| 14 | IA01802 | SEA | 15104 | 10 | 18 | 128 |
| 15 | IA01804 | SEA | 15104 | 11 | 17 | 105 |
| 19 | IA01802 | SEA | 15105 | 11 | 14 | 131 |
| 20 | IA01804 | SEA | 15105 | 11 | 18 | 104 |
| 23 | IA01802 | SEA | 15106 | 12 | 15 | 106 |
| 24 | IA01804 | SEA | 15106 | 10 | 15 | 111 |
| 27 | IA01802 | SEA | 15107 | 12 | 17 | 131 |
| 28 | IA01804 | SEA | 15107 | 10 | 13 | 113 |

| Obs | FlightID | Dest | Depart | FClass | BClass | EClass |
|-----|----------|------|--------|--------|--------|--------|
| 1 | IA01802 | SEA | 15101 | 10 | 9 | 132 |
| 6 | IA01802 | SEA | 15102 | 12 | 11 | 126 |
| 11 | IA01804 | SEA | 15103 | 12 | 12 | 136 |
| 19 | IA01802 | SEA | 15105 | 11 | 14 | 131 |

| 1 IA01802 15101 10 2 IA01804 15101 11 3 IA02901 15101 13 4 IA03100 15101 13 5 IA03101 15101 14 6 IA01802 15102 12 7 IA01804 15102 12 8 IA02901 15102 14 9 IA03100 15102 16 10 IA01802 15103 12 11 IA01804 15103 12 12 IA02901 15103 12 13 IA02901 15103 12 13 IA03100 15103 14 14 IA01802 15103 14 14 IA01802 15104 10 15 IA01804 15104 11 16 IA02901 15104 13 17 IA03100 15104 14 18 IA03101 15105 11 20 IA01804 151 | 9 12 24 22 . 11 8 25 26 13 12 21 18 18 | 132 111 138 150 133 126 119 132 143 115 136 155 137 128 |
|---|---|--|
| 3 IA02901 15101 13 4 IA03100 15101 13 5 IA03101 15101 14 6 IA01802 15102 12 7 IA01804 15102 12 8 IA02901 15102 14 9 IA03100 15102 16 10 IA01802 15103 12 11 IA01804 15103 12 12 IA02901 15103 12 13 IA03100 15103 12 13 IA03100 15103 12 13 IA01804 15103 12 13 IA01802 15104 10 15 IA01804 15104 11 16 IA02901 15104 13 17 IA03100 15104 14 18 IA03101 15104 13 19 IA01802 15105 11 20 IA01804 15105 11 21 IA02901 1 | 24 22 11 8 25 26 13 12 21 18 | 138 150 133 126 119 132 143 115 136 155 |
| 4 IA03100 15101 13 5 IA03101 15101 14 6 IA01802 15102 12 7 IA01804 15102 12 8 IA02901 15102 14 9 IA03100 15102 16 10 IA01802 15103 12 11 IA01804 15103 12 12 IA02901 15103 12 13 IA03100 15103 14 14 IA01802 15104 10 15 IA01804 15104 10 15 IA01804 15104 11 16 IA02901 15104 13 17 IA03100 15104 14 18 IA03101 15104 13 19 IA01802 15105 11 20 IA01804 15105 11 21 IA02901 15105 13 | 22 . 11 8 25 26 13 12 21 18 18 | 150 133 126 119 132 143 115 136 155 |
| 5 IA03101 15101 14 6 IA01802 15102 12 7 IA01804 15102 12 8 IA02901 15102 14 9 IA03100 15102 16 10 IA01802 15103 12 11 IA01804 15103 12 12 IA02901 15103 12 13 IA03100 15103 14 14 IA01802 15104 10 15 IA01804 15104 10 15 IA01804 15104 11 16 IA02901 15104 13 17 IA03100 15104 14 18 IA03101 15104 13 19 IA01802 15105 11 20 IA01804 15105 11 21 IA02901 15105 13 | 11 8 25 26 13 12 21 18 | 133 126 119 132 143 115 136 155 |
| 6 IA01802 15102 12 7 IA01804 15102 12 8 IA02901 15102 14 9 IA03100 15102 16 10 IA01802 15103 12 11 IA01804 15103 12 12 IA02901 15103 12 13 IA03100 15103 14 14 IA01802 15103 14 14 IA01802 15104 10 15 IA01804 15104 11 16 IA02901 15104 13 17 IA03100 15104 14 18 IA03101 15104 13 19 IA01802 15105 11 20 IA01804 15105 11 21 IA02901 15105 13 | 11 8 25 26 13 12 21 18 | 126 119 132 143 115 136 155 |
| 7 IA01804 15102 12 8 IA02901 15102 14 9 IA03100 15102 16 10 IA01802 15103 12 11 IA01804 15103 12 12 IA02901 15103 12 13 IA03100 15103 14 14 IA01802 15104 10 15 IA01804 15104 11 16 IA02901 15104 13 17 IA03100 15104 14 18 IA03101 15104 13 19 IA01802 15105 11 20 IA01804 15105 11 21 IA02901 15105 13 | 8 25 26 13 12 21 18 | 119 132 143 115 136 155 137 |
| 8 IA02901 15102 14 9 IA03100 15102 16 10 IA01802 15103 12 11 IA01804 15103 12 12 IA02901 15103 12 13 IA03100 15103 14 14 IA01802 15104 10 15 IA01804 15104 11 16 IA02901 15104 13 17 IA03100 15104 14 18 IA03101 15104 13 19 IA01802 15105 11 20 IA01804 15105 11 21 IA02901 15105 13 | 25 26 13 12 21 18 | 132 143 115 136 155 137 |
| 9 IA03100 15102 16 10 IA01802 15103 12 11 IA01804 15103 12 12 IA02901 15103 12 13 IA03100 15103 14 14 IA01802 15104 10 15 IA01804 15104 11 16 IA02901 15104 13 17 IA03100 15104 14 18 IA03101 15104 13 19 IA01802 15105 11 20 IA01804 15105 11 21 IA02901 15105 13 | 26 13 12 21 18 18 | 143 115 136 155 137 |
| 10 IA01802 15103 12 11 IA01804 15103 12 12 IA02901 15103 12 13 IA03100 15103 14 14 IA01802 15104 10 15 IA01804 15104 11 16 IA02901 15104 13 17 IA03100 15104 14 18 IA03101 15104 13 19 IA01802 15105 11 20 IA01804 15105 11 21 IA02901 15105 13 | 13 12 21 18 18 | 115 136 155 137 |
| 11 IA01804 15103 12 12 IA02901 15103 12 13 IA03100 15103 14 14 IA01802 15104 10 15 IA01804 15104 11 16 IA02901 15104 13 17 IA03100 15104 14 18 IA03101 15104 13 19 IA01802 15105 11 20 IA01804 15105 11 21 IA02901 15105 13 | 12 21 18 18 | 136 155 137 |
| 12 IA02901 15103 12 13 IA03100 15103 14 14 IA01802 15104 10 15 IA01804 15104 11 16 IA02901 15104 13 17 IA03100 15104 14 18 IA03101 15104 13 19 IA01802 15105 11 20 IA01804 15105 11 21 IA02901 15105 13 | 21 18 18 | 155 137 |
| 13 IA03100 15103 14 14 IA01802 15104 10 15 IA01804 15104 11 16 IA02901 15104 13 17 IA03100 15104 14 18 IA03101 15104 13 19 IA01802 15105 11 20 IA01804 15105 11 21 IA02901 15105 13 | 18 18 | 137 |
| 14 IA01802 15104 10 15 IA01804 15104 11 16 IA02901 15104 13 17 IA03100 15104 14 18 IA03101 15104 13 19 IA01802 15105 11 20 IA01804 15105 11 21 IA02901 15105 13 | 18 | |
| 15 IA01804 15104 11 16 IA02901 15104 13 17 IA03100 15104 14 18 IA03101 15104 13 19 IA01802 15105 11 20 IA01804 15105 11 21 IA02901 15105 13 | | 128 |
| 16 IA02901 15104 13 17 IA03100 15104 14 18 IA03101 15104 13 19 IA01802 15105 11 20 IA01804 15105 11 21 IA02901 15105 13 | | |
| 17 IA03100 15104 14 18 IA03101 15104 13 19 IA01802 15105 11 20 IA01804 15105 11 21 IA02901 15105 13 | 17 | 105 |
| 18 IA03101 15104 13 19 IA01802 15105 11 20 IA01804 15105 11 21 IA02901 15105 13 | 22 | 150 |
| 19 IA01802 15105 11 20 IA01804 15105 11 21 IA02901 15105 13 | 17 | 144 |
| 20 IA01804 15105 11 21 IA02901 15105 13 | | 142 |
| 21 IA02901 15105 13 | 14 | 131 |
| | 18 | 104 |
| 22 IA03100 15105 15 | 14 | 145 |
| 22 17 (05 100 15 105 15 | 22 | 99 |
| 23 IA01802 15106 12 | 15 | 106 |
| 24 IA01804 15106 10 | 15 | 111 |
| 25 IA02901 15106 13 | 24 | 137 |
| 26 IA03100 15106 15 | 16 | 137 |
| 27 IA01802 15107 12 | 17 | 131 |
| 28 IA01804 15107 10 | 13 | 113 |
| 29 IA02901 15107 13 | | 144 |
| 30 IA03100 15107 15 | 19 | 105 |

| Obs | FlightID | Depart | FClass | BClass | EClass |
|-----|----------|--------|--------|--------|--------|
| 1 | IA01802 | 15101 | 10 | 9 | 132 |
| 2 | IA01804 | 15101 | 11 | 12 | 111 |
| 3 | IA02901 | 15101 | 13 | 24 | 138 |
| 4 | IA03100 | 15101 | 13 | 22 | 150 |
| 5 | IA03101 | 15101 | 14 | | 133 |
| 6 | IA01802 | 15102 | 12 | 11 | 126 |
| 7 | IA01804 | 15102 | 12 | 8 | 119 |
| 8 | IA02901 | 15102 | 14 | 25 | 132 |
| 9 | IA03100 | 15102 | 16 | 26 | 143 |
| 10 | IA01802 | 15103 | 12 | 13 | 115 |
| 11 | IA01804 | 15103 | 12 | 12 | 136 |
| 12 | IA02901 | 15103 | 12 | 21 | 155 |
| 13 | IA03100 | 15103 | 14 | 18 | 137 |
| 14 | IA01802 | 15104 | 10 | 18 | 128 |
| 15 | IA01804 | 15104 | 11 | 17 | 105 |
| 16 | IA02901 | 15104 | 13 | 22 | 150 |
| 17 | IA03100 | 15104 | 14 | 17 | 144 |
| 18 | IA03101 | 15104 | 13 | | 142 |
| 19 | IA01802 | 15105 | 11 | 14 | 131 |
| 20 | IA01804 | 15105 | 11 | 18 | 104 |
| 21 | IA02901 | 15105 | 13 | 14 | 145 |
| 22 | IA03100 | 15105 | 15 | 22 | 99 |
| 23 | IA01802 | 15106 | 12 | 15 | 106 |
| 24 | IA01804 | 15106 | 10 | 15 | 111 |
| 25 | IA02901 | 15106 | 13 | 24 | 137 |
| 26 | IA03100 | 15106 | 15 | 16 | 137 |
| 27 | IA01802 | 15107 | 12 | 17 | 131 |
| 28 | IA01804 | 15107 | 10 | 13 | 113 |
| 29 | IA02901 | 15107 | 13 | 19 | 144 |
| 30 | IA03100 | 15107 | 15 | 23 | 105 |

| Obs | FlightID | Dest | Depart | FClass | BClass | EClass |
|-----|----------|------|------------|--------|--------|--------|
| 1 | IA01802 | SEA | 05/06/2001 | 10.0 | 9.0 | 132.0 |
| 2 | IA01804 | SEA | 05/06/2001 | 11.0 | 12.0 | 111.0 |
| 3 | IA02901 | HNL | 05/06/2001 | 13.0 | 24.0 | 138.0 |
| 4 | IA03100 | ANC | 05/06/2001 | 13.0 | 22.0 | 150.0 |
| 5 | IA03101 | ANC | 05/06/2001 | 14.0 | | 133.0 |
| 6 | IA01802 | SEA | 05/07/2001 | 12.0 | 11.0 | 126.0 |
| 7 | IA01804 | SEA | 05/07/2001 | 12.0 | 8.0 | 119.0 |
| 8 | IA02901 | HNL | 05/07/2001 | 14.0 | 25.0 | 132.0 |
| 9 | IA03100 | ANC | 05/07/2001 | 16.0 | 26.0 | 143.0 |
| 10 | IA01802 | SEA | 05/08/2001 | 12.0 | 13.0 | 115.0 |
| 11 | IA01804 | SEA | 05/08/2001 | 12.0 | 12.0 | 136.0 |
| 12 | IA02901 | HNL | 05/08/2001 | 12.0 | 21.0 | 155.0 |
| 13 | IA03100 | ANC | 05/08/2001 | 14.0 | 18.0 | 137.0 |
| 14 | IA01802 | SEA | 05/09/2001 | 10.0 | 18.0 | 128.0 |
| 15 | IA01804 | SEA | 05/09/2001 | 11.0 | 17.0 | 105.0 |
| 16 | IA02901 | HNL | 05/09/2001 | 13.0 | 22.0 | 150.0 |
| 17 | IA03100 | ANC | 05/09/2001 | 14.0 | 17.0 | 144.0 |
| 18 | IA03101 | ANC | 05/09/2001 | 13.0 | | 142.0 |
| 19 | IA01802 | SEA | 05/10/2001 | 11.0 | 14.0 | 131.0 |
| 20 | IA01804 | SEA | 05/10/2001 | 11.0 | 18.0 | 104.0 |
| 21 | IA02901 | HNL | 05/10/2001 | 13.0 | 14.0 | 145.0 |
| 22 | IA03100 | ANC | 05/10/2001 | 15.0 | 22.0 | 99.0 |
| 23 | IA01802 | SEA | 05/11/2001 | 12.0 | 15.0 | 106.0 |
| 24 | IA01804 | SEA | 05/11/2001 | 10.0 | 15.0 | 111.0 |
| 25 | IA02901 | HNL | 05/11/2001 | 13.0 | 24.0 | 137.0 |
| 26 | IA03100 | ANC | 05/11/2001 | 15.0 | 16.0 | 137.0 |
| 27 | IA01802 | SEA | 05/12/2001 | 12.0 | 17.0 | 131.0 |
| 28 | IA01804 | SEA | 05/12/2001 | 10.0 | 13.0 | 113.0 |
| 29 | IA02901 | HNL | 05/12/2001 | 13.0 | 19.0 | 144.0 |
| 30 | IA03100 | ANC | 05/12/2001 | 15.0 | 23.0 | 105.0 |

| Obs | FlightID | Destination | Departure Date | First Class | Business Class | Economy Class |
|-----|----------|-------------|-------------------|----------------|-------------------|------------------|
| 1 | IA01802 | SEA | 15101 | 10 | 9 | 132 |
| 2 | IA01804 | SEA | 15101 | 11 | 12 | 111 |
| 3 | IA02901 | HNL | 15101 | 13 | 24 | 138 |
| 4 | IA03100 | ANC | 15101 | 13 | 22 | 150 |
| 5 | IA03101 | ANC | 15101 | 14 | | 133 |
| 6 | IA01802 | SEA | 15102 | 12 | 11 | 126 |
| 7 | IA01804 | SEA | 15102 | 12 | 8 | 119 |
| 8 | IA02901 | HNL | 15102 | 14 | 25 | 132 |
| 9 | IA03100 | ANC | 15102 | 16 | 26 | 143 |
| 10 | IA01802 | SEA | 15103 | 12 | 13 | 115 |
| 11 | IA01804 | SEA | 15103 | 12 | 12 | 136 |
| 12 | IA02901 | HNL | 15103 | 12 | 21 | 155 |
| 13 | IA03100 | ANC | 15103 | 14 | 18 | 137 |
| 14 | IA01802 | SEA | 15104 | 10 | 18 | 128 |
| 15 | IA01804 | SEA | 15104 | 11 | 17 | 105 |
| 16 | IA02901 | HNL | 15104 | 13 | 22 | 150 |
| 17 | IA03100 | ANC | 15104 | 14 | 17 | 144 |
| 18 | IA03101 | ANC | 15104 | 13 | | 142 |
| 19 | IA01802 | SEA | 15105 | 11 | 14 | 131 |
| 20 | IA01804 | SEA | 15105 | 11 | 18 | 104 |
| 21 | IA02901 | HNL | 15105 | 13 | 14 | 145 |
| 22 | IA03100 | ANC | 15105 | 15 | 22 | 99 |
| 23 | IA01802 | SEA | 15106 | 12 | 15 | 106 |
| 24 | IA01804 | SEA | 15106 | 10 | 15 | 111 |
| 25 | IA02901 | HNL | 15106 | 13 | 24 | 137 |
| 26 | IA03100 | ANC | 15106 | 15 | 16 | 137 |
| 27 | IA01802 | SEA | 15107 | 12 | 17 | 131 |
| 28 | IA01804 | SEA | 15107 | 10 | 13 | 113 |
| 29 | IA02901 | HNL | 15107 | 13 | 19 | 144 |
| 30 | IA03100 | ANC | 15107 | 15 | 23 | 105 |