



Quiz, Lesson 11: Creating Summary Reports

Your Score:
100%

Congratulations! Your score of 100% indicates that you've mastered the topics in this lesson. If you'd like, you can review the feedback for each question.



1. Which of these procedures produces output that is most useful for detecting duplicate values?

- a. PROC PRINT
- b. PROC FREQ
- c. PROC MEANS
- d. PROC UNIVARIATE

Your answer: b

Correct answer: b

PROC MEANS and PROC UNIVARIATE analyze numeric variables. PROC PRINT is more useful for producing a report of invalid values, with a WHERE statement to specify conditions. PROC FREQ identifies duplicate values by default in the Frequency column of the report.

Review: [Validating Data with PROC FREQ](#)



2. Which of these programs is most useful for determining the exact observation that contains a numeric variable with an extreme value?

a.

```
proc print data=sales.totals;  
  var ProdNum Sales Region;  
run;
```

b.

```
proc freq data=sales.totals;  
  tables ProdNum Sales Region;  
run;
```

c.

```
proc univariate data=sales.totals;  
run;
```

Your answer: c

Correct answer: c

Only PROC UNIVARIATE provides observation numbers for data outliers.

Review: [Using PROC UNIVARIATE to Detect Data Outliers](#), [Validating Data Using PROC UNIVARIATE](#)



3. A PROC FREQ analysis identified invalid and missing values in a data set. Which of these procedures can display the observations that contain invalid or missing values?

- a. PROC PRINT
- b. PROC FREQ

- c. PROC MEANS
- d. PROC UNIVARIATE

Your answer: **a**

Correct answer: **a**

PROC PRINT is the only one of these procedures that displays the observations themselves. The other three procedures produce summary reports that display descriptive statistics.

Review: [Identifying Observations with Invalid Data](#)



4. Which PROC FREQ step creates the output shown here?

Number of Variable Levels		
Variable	Label	Levels
Order_Type	Order Type	3

Order Type		
Order_Type	Frequency	Percent
1	13	59.09
2	2	9.09
3	7	31.82

a.

```
proc freq data=orion.qtr1_2007;
  tables Order_Type;
run;
```

b.

```
proc freq data=orion.qtr1_2007 nlevels;
  tables Order_Type/nocum;
run;
```

c.

```
proc freq data=orion.qtr1_2007 nlevels;
  tables Order_Type/noprint;
run;
```

d.

```
proc freq data=orion.qtr1_2007 nlevels;
  tables Order_Type nocum;
run;
```

Your answer: **b**

Correct answer: **b**

To display a table showing the levels of all variables, you specify the NLEVELS option in the PROC FREQ statement. To suppress the cumulative frequency and cumulative percent that appear in a one-way frequency table by default, you specify the NOCUM option in the TABLES statement. You must use a slash before any options in a TABLES statement.

Review: [Suppressing Statistics in One-Way Frequency Tables](#), [Using PROC FREQ Options to Validate Your Data](#)



5. This PROC MEANS step creates all of the statistics listed below.

```
proc means data=orion.sales;
```

```
run;
```

- minimum and maximum
- the total number of observations that PROC MEANS processes for each subgroup (**N Obs**)
- mean and standard deviation
- the number of nonmissing values (**N**)

- a. True
- b. False

Your answer: b

Correct answer: b

By default, a PROC MEANS step that has no CLASS statement produces all of these statistics except for N Obs.

Review: [The MEANS Procedure](#)



6. What must be added to this PROC MEANS statement to produce this output?

```
proc means data=orion.customer_dim _____;  
  var Customer_Age;  
  class Customer_Gender;  
  where Customer_Country ne 'US';  
run;
```

The MEANS Procedure

Analysis Variable: Customer_Age		
Customer_Age		
Customer Gender	Range	Mean
F	54.0	35.1
M	54.0	47.0

- a. nonobs
- b. range mean
- c. range mean nonobs bestw.
- d. range mean nonobs maxdec=1

Your answer: d

Correct answer: d

This output does not display the default statistics, so you need to specify the statistics keywords, RANGE and MEAN. To suppress the N Obs column that the CLASS statement creates, you must include the NONOBS option. Specifying MAXDEC=1 ensures that statistics are displayed with one decimal place.

Review: [Specifying Statistics in the PROC MEANS Statement](#), [PROC MEANS Statement Options](#)



7. Which option enables you to specify the number of extreme observations displayed by PROC UNIVARIATE?

- a. NEXTROBS=
- b. NLEVELS
- c. NOPRINT
- d. _ALL_

Your answer: a

Correct answer: a

In PROC UNIVARIATE, you use the NEXTROBS= option to specify the number of extreme observations. In PROC FREQ, you can use the NLEVELS option to display a table with the number of distinct variable values. You use the NOPRINT option in the TABLES statement to suppress individual frequency tables. To display only the number of levels for all variables, you can use _ALL_, along with the NOPRINT option in the TABLES statement.

Review: [Validating Data Using PROC UNIVARIATE](#)



8. In a PROC FREQ step, you can use user-defined formats, as well as existing SAS formats, to group data.

- a. true
- b. false

Your answer: a

Correct answer: a

You can group the values of a variable into categories by applying formats. You can use existing SAS formats or user-defined formats. For example, in this lesson, you used a user-defined format in a PROC FREQ step to categorize salary values.

Review: [Selecting Variables for Frequency Tables](#), [Using Formats in PROC FREQ](#)



9. Is there a problem with this program?

```
ods pdf file="filepath/myreport.pdf";  
  
proc print data=orion.sales;  
run;  
  
ods close;
```

- a. yes
- b. no

Your answer: a

Correct answer: a

The ODS CLOSE statement is missing the PDF destination. This will cause an error in SAS.

Review: [Using the SAS Output Delivery System](#)



10. Which program correctly opens and closes the LISTING destination?

- ☐ a.

```
ods;  
proc freq data=orion.staff;  
    tables Manager_ID;  
run;  
ods close;
```
- ☐ b.

```
ods listing;  
proc freq data=orion.staff;
```

```
tables Manager_ID;  
run;  
ods listing close;
```

☐ c.

```
ods destination;  
proc freq data=orion.staff;  
tables Manager_ID;  
run;  
ods destination close;
```

Your answer: b

Correct answer: b

The ODS statements that open and close the LISTING destination must specify the LISTING keyword.

Review: [Using the SAS Output Delivery System](#)

Close

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