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Assigning Formats to Variables

In your SAS reports, formats control how the data values are displayed. To make data values more understandable when they are displayed in your procedure output, you can use the FORMAT statement, which associates formats with variables.

Formats affect only how the data values appear in output, not the actual data values as they are stored in the SAS data set.

General form, FORMAT statement:

```
FORMAT variable(s) format-name;
```

where

- variable(s) is the name of one or more variables whose values are to be written according to a particular pattern
- format-name specifies a SAS format or a user-defined format that is used to write out the values.

Example:

```
format fee dollar4.;
```

Specifying SAS built-in/pre-defined formats

The table below describes some SAS formats that are commonly used, where

w: field widths; d: decimal places

Commonly Used SAS Formats

Format	Specifies values …	Example
COMMAw.d	that contain commas and decimal places	comma8 .2 (5,678.90)
DOLLARw.d	that contain dollar signs, commas, and decimal places	dollar 6.2 ($23.12)
MMDDYYw.	as date values of the form 09/12/97 (MMDDYY8.) or 09/12/1997 (MMDDYY10.)	mmddyy 10. (09/12/1997)
w.	rounded to the nearest integer in w spaces	4. (1347)
w.d	rounded to d decimal places in w spaces	5.2 (12.67)
$w.	as character values in w spaces	$12.
DATEw.	as date values of the form 16OCT99 (DATE7.) or 16OCT1999 (DATE9.)	date9. (16OCT1999)

Field Widths (w)

All SAS formats specify the total field width (w) that is used for displaying the values in the output. For example, suppose the longest value for the variable Net is a four-digit number, such as 5400. To specify the COMMAw.d format for Net, you specify a field width of 5 or more. You must count the comma, because it occupies a position in the output.

Caution When you use a SAS format, be sure to specify a field width (w) that is wide enough for the largest possible value. Otherwise, values might not be displayed properly.

```
format net comma5.0;

5  ,  4  0  0

1  2  3  4  5
```

Decimal Places (d)

For numeric variables you can also specify the number of decimal places (d), if any, to be displayed in the output. Numbers are rounded to the specified number of decimal places.

Writing the whole number 2030 as 2,030.00 requires eight print positions, including two decimal places and the decimal point.

```
format qtr3tax comma8.2;
```

2	,	0	3	0	.	0	0
1	2	3	4	5	6	7	8

Formatting 15374 with a dollar sign, commas, and two decimal places requires ten print positions.

```
format totsales dollar10.2;
```

$	1	5	,	3	7	4	.	0	0
1	2	3	4	5	6	7	8	9	10

Temporary vs. Permanent formats

Just like Labels, if you include your FORMAT statement in the DATA step, the formats remain associated with the respective variables permanently;

if you include your FORMAT statement in a PROC step, the formats are used only for that procedure temporarily

Additional Note If you assign temporary labels or formats within a PROC step, they override any permanent labels or formats that were previously assigned during the DATA step.