

What are some tutorials for dealing with missing values in SAS?

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There are a variety of tutorials available for handling missing values in SAS. These tutorials typically cover techniques for identifying and handling missing values, such as using PROC FREQ and PROC MEANS, as well as imputation methods like mean substitution and multiple imputation. Additionally, there are tutorials that focus on specific scenarios, such as dealing with missing data in time series or categorical data. These tutorials often provide step-by-step instructions and examples to help users effectively manage and analyze data with missing values in SAS. They are a valuable resource for individuals looking to improve their data analysis skills and ensure accurate results in their projects.

Missing Values

SAS stores missing values differently depending on the variable type.

Character variables: Missing values for character variables appear as blanks. *Numeric variables:* Missing values for numeric variables (including date variables) appear as a period.

The screenshot shows a SAS VIEWTABLE window titled 'VIEWTABLE: Work.Sample'. The table contains 15 rows of data with the following columns: StudentID, Gender, DOB, Race, Ethnicity, Class, Weight, Height, Enrollment_Date, and State_Residency. Red arrows point to missing values in the 'Weight' and 'Enrollment_Date' columns, with text annotations: 'Missing numeric values are a period.' and 'Missing character values are blank.'

	StudentID	Gender	DOB	Race	Ethnicity	Class	Weight	Height	Enrollment_Date	State_Residency
1	5	1	08/15/1991	2	1	1	226	70	08/15/2012	In state
2	9	1	11/01/1991	3	1	1	144	71	08/15/2012	In state
3	35	1	10/29/1990	1	1	1	.	.	08/15/2012	Out of state
4	70	2	04/06/1994	1	2	1	175	63	08/15/2012	In state
5	44	1	01/31/1991	1	2	2	170	77	.	In state
6	51	1	.	1	1	2	177	71	08/15/2011	Out of state
7	85	2	09/26/1991	.	2	2	141	.	.	Out of state
8	19	1	05/25/1991	2	3	3	184	.	.	In state
9	40	1	10/29/1990	1	2	3	170	67	08/15/2010	In state
10	43	1	02/03/1990	2	2	3	.	.	08/15/2010	Out of state
11	24	1	09/04/1993	1	2	4	167	73	08/15/2007	In state
12	39	1	08/12/1993	3	2	4	150	73	08/15/2006	Out of state
13	45	1	03/09/1994	1	2	4	161	71	08/15/2007	In state
14	79	2	02/16/1992	1	2	4	143	62	08/15/2008	In state
15	89	.	09/11/1993	1	2	4	128	64	08/15/2009	Out of state

It is important to understand how SAS handles missing values when you execute statements. Depending on the statements being used, SAS might handle missing values in different ways. For example, it might treat a missing value as the lowest possible value (e.g., frequency tables in PROC FREQ), or it might omit the value from the computation (e.g., regression).

Internally, SAS treats numeric missing values as an extremely small or an extremely large number. Most of the time, the user will probably not be affected by this. In general, if you are subsetting data or doing any kind of conditional logic based on continuous numeric values, you should **always explicitly tell SAS how to handle missing values first**.

Your SAS help manual will help you understand how missing values are treated in the statements you are executing.

SAS automatically detects blank cells in external data files as missing values. You do not need to enter a period character in blank cells.

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