

MET MA 603:
Assignment Project Exam Help
SAS Programming and
<https://powcoder.com>
Applications

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Functions

Using Functions

In mathematics, a function (e.g., $f(x)$) is a specific relationship between an input and an output. For example, the square root function takes a number as input, and returns the result of raising the number to the one half power as an output.

Functions in SAS work in much the same way. The input values are entered inside parenthesis following the name of the function. Some functions have more than one input, while others don't have any input value at all.

Note that in SAS the exponential function, i.e., x^y , is entered using the syntax `x ** y`.

In almost all cases, a given function's input and output correspond to a particular data type.

Examples of Functions with Character Input

CAT: Combines two or more inputs

Cat(City, “, ”, State) -> Boston, MA

COMPRESS: Removes all spaces from the input

Compress(“New York, New York”) ->
NewYork,NewYork

SUBSTR: Returns a specific part of the input

Substr(“Hello, World!”, 3, 6) -> llo, W

LENGTH: Returns the number of characters in the input

Length(“Hello, World!”) -> 13

FIND: Returns the position of a substring within

find('She sells seashells? Yes, she does.','she ') ->

Examples of Functions with Numeric Input

LOG: Returns the natural log of the input

$\text{Log}(100) \rightarrow 4.605$

MAX: Returns the maximum of the inputs

$\text{Max}(5, 55, 2, 42, 100, 8, 9) \rightarrow 100$

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MIN: Returns the minimum of the inputs

$\text{Max}(5, 55, 2, 42, 100, 8, 9) \rightarrow 2$

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SUM: Returns the sum of the inputs

$\text{Sum}(5, 55, 2, 42, 100, 8, 9) \rightarrow 221$

ROUND: Returns the value of the rounded input

$\text{Round}(4.605, .1) \rightarrow 4.6$

$\text{Round}(4.605) \rightarrow 5$

Examples of Functions with Date Input

MDY: Returns the data corresponding to the inputs

MDY(1,3,1960) -> 2

DAY: Returns the day of the month of the input

Day(2) -> 3

MONTH: Returns the month of the input

Month(2) -> 1

YEAR: Returns the year of the input

Year(2) -> 1960

TODAY: Returns the current date (does not use an input)

Today() -> 21342

Practice

Use the reps.sas dataset. Create a temporary SAS dataset, named reps, which has a new variable containing the office number.

Hint: Use the <https://www.powcoder.com> FIND function described in the Readings link.

Your result should look similar to what is below (only the first several records are shown):

<https://www.powcoder.com>
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VIEWTABLE: Work.Reps						
	Name	Party	Office	Phone	off_space	Office_Number
1	Byrne, Bradley	R	119 CHOB	202-225-4931	4	119
2	Kirkpatrick, Ann	D	201 CHOB	202-225-3361	4	201
3	Crawford, Rick	R	1711 LHOB	202-225-4076	5	1711
4	LaMalfa, Doug	R	322 CHOB	202-225-3076	4	322
5	DeGette, Diana	D	2368 RHOB	202-225-4431	5	2368

Readings

- Textbook sections 3.1, 3.2, 3.3, 3.4, 3.9
- <http://support.sas.com/documentation/cdl/en/lrdict/64316/HTML/default/viewer.htm#a002267763.htm>
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