

Expressions – Math

Docmosis looks for curly brackets inside the field markers << { ... } >> and treats the contents of the curly brackets as an expression to be calculated.

Simple Math

Calculations are performed using floating point or decimal numbers.

$$12.5 + 1.1 = 13.6$$

Before the calculation, integers are converted to decimal and the result will be displayed in decimal:

$$5 + 3 = 8.0$$

If you want to display an integer in the result you should format the result like this:

$$5 + 3 = 8$$

To be sure your result looks the way you want, the presentation of the result should be controlled by the template:

$$100 / 7 = 14.28571428571428571428571428571428571428571428571429$$

$$100 / 7 = 14.286 \text{ [rounded to 3 decimal places]}$$

The BMDAS rules regarding order of evaluation and brackets are used:

$$1 + 2 * 3 + 4 = 1 + (2 \times 3) + 4 = 11$$

Using Variables with Expressions

The result of a calculation can be stored in a variable like this:

NB: the line above will be removed from the finished document – because it is just a calculation and it results in nothing being inserted in to the finished document.

The result of the calculation is : 11

Calculations Using Data

Price = 6
Weight = 1400
Length = 2754
Quantity = 11

If a field is found inside an expression then the data for that field will be converted to a number and used in the calculation.

Quantity x Price = 66.0

Weight / Quantity =

Again, with some formatting.

Quantity x Price = \$66.00

Weight / Quantity = 127.2727 kg

Mixing Strings and Numbers

Weight = 1400
Animal = elephant

If a field is used in an expression and the data for a field is a String then Docmosis will attempt to evaluate the expression as two Strings...

elephant1400 *[the two Strings will be joined together]*

Or it will indicate an error has occurred...

<<{animal*weight}>> Docmosis1 *[it does not make sense to multiply two Strings together]*

NB: Docmosis errors and footnotes are only injected in to documents when Docmosis is running in DEV mode.

Using Math Expressions in Conditional Sections

Expressions using tests like 'less than', 'greater than', 'equals' and so on, will evaluate to either "true" or "false"

Is price less than 100 : true

Length = 2.754 kilometers

Built-in Math Functions

A random number between 0 and 1 : 0.08794818965649898

The square root of 16 is : 4.0

Calculate 7 cubed, 7 to the power of 3, is : 343.0

The absolute value of -123 is : 123.0

Which is larger 42 or 57 : 57.0

Which is smaller 12 or 3 : 3.0