

EXAMPLE - Exponential Functions

This example demonstrates the exponential functions.

Functions:

Item	Description
EXP Function	Computes the value of e raised to the specified power. The value can be a Decimal or Integer literal or a reference to a column containing numeric values.
LN Function	Computes the natural logarithm of an input value. The value can be a Decimal or Integer literal or a reference to a column containing numeric values.
LOG Function	Computes the logarithm of the first argument with a base of the second argument.
POW Function	Computes the value of the first argument raised to the value of the second argument.

Source:

rowNum	X
1	-2
2	1
3	0
4	1
5	2
6	3
7	4
8	5

Transformation:

Transformation Name	New formula
Parameter: Formula type	Single row formula
Parameter: Formula	EXP (X)
Parameter: New column name	'expX'

Transformation Name	New formula
Parameter: Formula type	Single row formula
Parameter: Formula	LN (expX)
Parameter: New column name	'ln_expX'

Transformation Name	New formula
Parameter: Formula type	Single row formula
Parameter: Formula	LOG (X)
Parameter: New column name	'logX'

Transformation Name	New formula
Parameter: Formula type	Single row formula
Parameter: Formula	POW (10,logX)
Parameter: New column name	'pow_logX'

Results:

In the following, (null value) indicates that a null value is generated for the computation.

rowNum	X	expX	ln_expX	logX	pow_logX
1	-2	0.1353352832366127	-2	(null value)	(null value)
2	-1	0.1353352832366127	-0.9999999999999998	(null value)	(null value)
3	0	1	0	(null value)	0
4	1	2.718281828459045	1	0	1
5	2	7.3890560989306495	2	0.30102999566398114	1.9999999999999998
6	3	20.085536923187668	3	0.47712125471966244	3
7	4	54.59815003314423	4	0.6020599913279623	3.9999999999999999
8	5	148.41315910257657	5	0.6989700043360187	4.9999999999999999