

## Expressions – New Functions

### Summary

*A mixture of 11 new Aggregation and Maths functions have been added to the 2017 Q3 release.*

### Aggregation Functions

#### RankSequence

This function returns a value based upon the sequence of a series of numbers or dates:

- If all values are equal (23, 23, 23) then a value of **3** is returned
- If the values are increasing with no ties (10, 20, 30) then a value of **2** is returned
- If the values are increasing with ties (10, 20, 20) then a value of **1** is returned
- If the values have no order (73, 4, 56) then a value of **0** is returned
- If the values are decreasing with ties (50, 40, 40) then a value of **-1** is returned
- If the values are decreasing with no ties (50, 40, 30) then a value of **-2** is returned

#### RankCoeff

This function returns a value between -1 and 1 as a result of calculating a series of values (number or date) using the Spearman Rank Coefficient:

e.g. RankCoeff(10, 20, 30) will return a value of **1**

RankCoeff(9, 7, 8) will return a value of **-0.5**

## Maths Functions

A group of 9 functions have been added to cover basic, inverse and hyperbolic trigonometry:

### **Basic - Sin(n), Cos(n), Tan(n)**

More details on these functions can be found on the Wikipedia website:

[https://en.wikipedia.org/wiki/Trigonometric\\_functions](https://en.wikipedia.org/wiki/Trigonometric_functions)

### **Inverse – ASin(n), ACos(n), ATan(n)**

More details on these functions can be found on the Wikipedia website:

[https://en.wikipedia.org/wiki/Inverse\\_trigonometric\\_functions](https://en.wikipedia.org/wiki/Inverse_trigonometric_functions)

### **Hyperbolic – Sinh(n), Cosh(n), Tanh(n)**

More details on these functions can be found on the Wikipedia website:

[https://en.wikipedia.org/wiki/Hyperbolic\\_function](https://en.wikipedia.org/wiki/Hyperbolic_function)