

Webi Report Function Overview

Below are the lists of available Webi 3.1 report functions and will describe each & every functions along with example. Webi 4.0 reports are also having some functions with some additional futures.

Functions	Function Output	Syntax	Sample	Result																		
Abs	Returns the Absolute value of a Number	Num Abs(number)	=Abs(-97324) =Abs(54354)	97324 54354																		
Asc	ASCII value of a Character. Only one Character it will define the ASCII value, even if you add more than one Character.	Int Asc(Character)	=Asc("M") =Asc("A")	77 65																		
Average	Average of the Measure values. Average function mostly useful when you do average on a total of table measures. Average would provide the average where total Measures divided by no of rows of the table	Num Average(Measure[;Include Empty])	=Average([Amount])	<table><tr><th>Desc</th><th>Amount</th></tr><tr><td>A</td><td>2540</td></tr><tr><td>B</td><td>3210</td></tr><tr><td>C</td><td>1243</td></tr><tr><td>D</td><td>5214</td></tr><tr><td>E</td><td>8003</td></tr><tr><td>F</td><td>98721</td></tr><tr><td>Sum</td><td>118931</td></tr><tr><td>Average</td><td>19821.83</td></tr></table>	Desc	Amount	A	2540	B	3210	C	1243	D	5214	E	8003	F	98721	Sum	118931	Average	19821.83
Desc	Amount																					
A	2540																					
B	3210																					
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D	5214																					
E	8003																					
F	98721																					
Sum	118931																					
Average	19821.83																					
Block Name	Returns the Table Name where this Block Name function is used.	String BlockName()	=BlockName()	Master Table – Name of the table																		
Ceil	Rounds a Number up to the nearest Integer	Num Ceil(Number)	=Ceil(1234.51) =Ceil(1234.49) =Ceil(-1234.1)	1235 1235 -1234																		
Char	Character Associated with ASCII code	String Char(ascii_code)	=Char(100) =Char(77) =Char(42)	d M *																		
Column Number	Displays the column Number where this function used in a table	Int ColumnNumber()	<table><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td>C</td><td></td></tr><tr><td></td><td></td><td>N</td><td></td></tr></table> =ColumnNumber()							C				N		3 – Column Number function used in 3 rd column of that table						
		C																				
		N																				
Concatenation	Join 2 strings and make it single	String Concatenation (first_string;Second_string)	=Concatenation("SAP";" Business Objects")	SAP Business Objects																		
Connection	The parameters of the database connection used by a data provider. Data Provider name must enclosed in square bracket.	String Connection(dp)	=Connection([Query 1])	DB Layer: "Oracle OCI". DB Type: "Oracle 11".																		
Cos	Cosine of an angle	Num Cos(angle)	=Cos(360) =Cos(200)	-0.28 0.49																		
Count	Number of Values / rows in a dimensions or Measures. Includes distinct values only (default for dimensions) or all values (default for measures) in the calculation	int Count(obj[;IncludeEmpty] [;Distinct All])	=Count([Desc]) =Count([Amount])	<table><tr><th>Desc</th><th>Amount</th></tr><tr><td>A</td><td>2540</td></tr><tr><td>B</td><td>3210</td></tr><tr><td>C</td><td>1243</td></tr><tr><td>C</td><td>5214</td></tr><tr><td>E</td><td>8003</td></tr><tr><td>F</td><td>98721</td></tr></table>	Desc	Amount	A	2540	B	3210	C	1243	C	5214	E	8003	F	98721				
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C	5214																					
E	8003																					
F	98721																					

				Count Dim	5
				Count Measure	6
Current Date	Display the Current Date formatted according to the regional Settings in your server	Date CurrentDate()	=CurrentDate()	12/24/13	
Current Time	Display the Current Time formatted according to the regional Settings in your server	Time CurrentTime()	=CurrentTime()	2:05:54 PM	
Current User	Logon of the Current User	String CurrentUser()	=CurrentUser()	devuser	
Data Provider	Name of the Data provider containing a report Object	String DataProvider(obj)	=DataProvider([Country])	Query 1 – this is Default Data provider name	
Data Provider key Date	Key Date of the Data Provider. Data Provider name must enclosed in square bracket.	Date DataProviderKeyDate(dp)	=DataProviderKeyDate([dp])	24 December 2013	
Data Provider key Date Caption	Key Date Caption of the Data Provider. Data Provider name must enclosed in square bracket.	String DataProviderKeyDateCaption(dp)	=DataProviderKeyDateCaption([dp])	Returns "Current calendar date" if the keydate caption in the dp data provider is "Current calendar date".	
Data Provider SQL	SQL Query generated by the Data Provider	String DataProviderSQL([dp])	=DataProviderSQL([dp1])	Select object1 from table...	
Data provider Type	Type of a Data Provider –what kind of sources used for that report – Example - Universe, Free hand SQL, etc.,	String DataProviderType([dp])	=DataProviderType([dp1])	Universe	
Day Name	Day Name in the Date. The input date must be a variable. You cannot specify the date directly, as in DayName("12/24/2013").	String DayName(date)	=DayName([Sales Date])	Sales Date	Day Name
				6/16/2010	Wednesday
				6/21/2010	Monday
				6/23/2010	Wednesday
				6/25/2010	Friday
				6/26/2010	Saturday
Day Number Of Month	Return the Day number of that month	Int DayNumberOfMonth(date)	=DayNumberOfMonth([Sales Date])	Sales Date	Day Number
				6/16/2010	16
				6/21/2010	21
				6/23/2010	23
				6/25/2010	25
				6/26/2010	26
Day Number Of Week	Return the Day number of that week. Example 6/16/2010 is Wednesday and Webi report would consider Monday as Start of the Week. So Day Number for that week is 3.	Int DayNumberOfWeek()	=DayNumberOfWeek([Sales Date])	Sales Date	Week Number
				6/16/2010	3
				6/21/2010	1
				6/23/2010	3
				6/25/2010	5
				6/26/2010	6
Day Number Of Year	Return the Day number of that Year	Int DayNumberOfYear(date)	=DayNumberOfYear([Sales Date])	Sales Date	Day of Year
				4/5/2010	95
				4/7/2010	97
				4/8/2010	98
				4/12/2010	102
				4/13/2010	103

Days Between	Number of Days between 2 dates	Int DaysBetween(first_date;last_date)	=DaysBetween([Sales Date];CurrentDate())	<table><tr><td></td><td>Days Between</td></tr><tr><td>3/12/2010</td><td>1383</td></tr><tr><td>3/16/2010</td><td>1379</td></tr><tr><td>3/17/2010</td><td>1378</td></tr><tr><td>3/22/2010</td><td>1373</td></tr><tr><td>3/23/2010</td><td>1372</td></tr></table> *Current Date – 12/24/13		Days Between	3/12/2010	1383	3/16/2010	1379	3/17/2010	1378	3/22/2010	1373	3/23/2010	1372
	Days Between															
3/12/2010	1383															
3/16/2010	1379															
3/17/2010	1378															
3/22/2010	1373															
3/23/2010	1372															
Document Author	Logon of the Document Creator	String DocumentAuthor()	=DocumentAuthor()	devuser												
Document Creation Date	Date on which a document was created	Date DocumnetCreationDate()	= DocumnetCreationDate()	12/10/13												
Document Creation Time	Time on which a document was created	Time DocumnetCreationTime()	= DocumnetCreationTime()	2:55:59 PM												
Document Date	Date on which a document was last saved	Date DocumnetDate()	= DocumnetDate()	12/10/13												
Document Name	Name of the document / report	String DocumnetName()	= DocumnetName()	Sample Webi Report												
Document Owner	Logon user name of the owner of the document (the last person who saved the document)	String DocumentOwner()	=DocumentOwner()	devuser												
Document Partially Refreshed	Will tell you whether the report is fully or partially refreshed.	Bool DocumentPartiallyRefreshed()	=DocumentPartiallyRefreshed()	Returns 1 & 0. 0 – Means Fully refreshed. 1 – Means partially refreshed. You can use these values in IF function to display TRUE / FALSE												
Document Time	Time on which a document was last saved	Time DocumnetTime()	= DocumnetTime()	4:25:39 PM												
Drill Filter	Drill Filters applied to a report or an Object in drill mode	String DrillFilters([Object Separator])	=DrillFilters()	Consider report has drill on Country and Year. If the DrillFilter return US – means Drill Filter applied on Country. US 2013 – Means Drill filter Applied on County & year.												
Euro Convert From	Converts a Euro amount to another currency. The currency code must be the code of one of the 12 EU currencies whose values were fixed in relation to the Euro prior to their abolition in January 2002. If it is not, the function returns #ERROR. The currencies are: <table><tr><td>Code</td><td>Currency Desc</td></tr><tr><td>BEF</td><td>Belgian franc</td></tr></table>	Code	Currency Desc	BEF	Belgian franc	num EuroConvertFrom(euro_amount;currency_code;round_level)	=EuroConvertFrom(1000;"FRF";2) =EuroConvertFrom(1000;"GRD";1) =EuroConvertFrom(1000;"ITL";0)	6559.57 340,750.1 1,936,270								
Code	Currency Desc															
BEF	Belgian franc															

	DEM	German mark			
	GRD	Greek drachma			
	ESP	Spanish peseta			
	FRF	French franc			
	IEP	Irish punt			
	ITL	Italian lira			
	LUF	Luxembourg franc			
	NLG	Dutch guilder			
	ATS	Austrian schilling			
	PTS	Portuguese escudo			
	FIM	Finnish mark			
Euro Convert To	Converts an amount to Euros. Currency code can be used as mentioned in the above table		num EuroConvertTo(noneuro_amount;curr_code;round_level)	=EuroConvertTo(6559.57;"FRF";2) =EuroConvertTo(6559.57;"DEM";2)	1000 3,353.85
Euro From Round Error	Returns the Rounding decimal place amount in the conversion. Example, EuroConvertFrom(1000;"FRF";1) return 6559.60 whereas without rounding this would be 6559.57, the difference is 0.03. The difference amount 0.03 will be returned when you use EuroFromRoundError(1000;"FRF";1).		num EuroFromRoundError(euro_amount;curr_code;round_level)	=EuroFromRoundError(1000;"FRF";1) =EuroFromRoundError(1000;"GRD";1) =EuroFromRoundError(1000;"NLG";1)	0.03 0 – means there is no difference in rounding the decimal places. -0.01 → 2,203.71 when you round this amount 2,203.7 and the difference is -0.01
Euro To Round Error	Returns the Rounding decimal place amount in the conversion. Same as above.		num EuroToRoundError(noneuro_amount;curr_code;round_level)	=EuroToRoundError(1000;"FRF";1)	-0.05 → 152.45 while rounding it would be 152.4 and the difference is -0.05
Even	Determines the Number is Even or not		Bool Even(number)	=Even(10) =Even(11)	1 – This is even Number 0 – Not an even Number
Exp	Exponential (e raised to a power). An exponential is the constant e (2.718...) raised to a power.		Num Exp(Number)	=Exp(2) =Exp(3)	7.39 20.09
Fact	Factorial of an Integer. Factorial of number is multiple of all the integers from 1 to number. If FACT(4) then it would calculate 1*2*3*4= 24 an FACT(6) is 1*2*3*4*5*6=720		Num Fact(number)	=Fact(4) =Fact(6)	24 720
Fill	Concatenate the string by repeating N times.		String Fill(repeating_string; num_repeats)	=Fill("Business Objects ";3) =Fill("SAP ";5)	Business Objects Business Objects Business Objects SAP SAP SAP SAP SAP
First	Returns the first value in a data		Input_type	=First([Country])	USA – First value of

	set (dimension or Measure Objects). Used in a break footer, First returns the first value in the in the break. Used in a section footer, First returns the first value in the section. Used in a table footer, First([Sales]) returns the first value of [Sales] in the table.	First(dimension measure)	=First([Sales])	Country Object. 102364.55 – first value of the Sales Measure based on your Query data set.
Floor	Round the Number down to the Nearest integer	Int Floor(number)	=Floor(1234.61) =Floor(-1234.61)	1234 -1235
Force Merge	ForceMerge is the equivalent of the BO Desktop Intelligence Multicube function. Includes synchronized dimensions in measure calculations when the dimensions are not in the measure's Calculation context / Data Provider. When you have more than one data provider and one DP does not have a synchronized dimension and you need to merge that DP measure with other DP, ForceMerge would help you to get the Measure amount in single Object. ForceMerge([Sales]) returns the value of [Revenue], taking into account any synchronized Dimensions that do not appear in the same block as the [Sales] measure.	Num ForceMerge(number)	=ForceMerge([Sales])	104342.50
Format Date	Formats a date according to the Specified format	string FormatDate(date;format_string)	=FormatDate(CurrentDate();"yyyy/dd/MM") =FormatDate(CurrentDate();"MM/yyyy")	2013/24/12 12/2013
Format Number	Formats a Number according to the Specified format	string FormatNumber(number;format_string)	=FormatNumber([Sales];"#,##0") =FormatNumber([Sales];"#,##0.00")	12,358,210 12,358,210.56
Get Content Locale	Returns the Local (Desktop – where you are accessing the report) Language of your report Data content	String GetContentLocale()	=GetContentLocale()	en
Get Dominant Preferred Viewing	Returns the dominant locale in the user's Preferred Viewing Locale group. The Translation	String GetDominantPreferredViewingLocale()	=GetDominantPreferredViewingLocale()	en_US

Locale()	Manager Guide lists all the Dominant Preferred Viewing Locales. Please refer from SAP Portal for more information (page 51). http://help.sap.com/businessobject/product_guides/boexir4/en/xi4_translation_management_tool_en.pdf			
Get Locale	User's local system used format for their Webi Interface (example, menu items and button text)	String GetLocale()	=GetLocale()	en
Get Localized	This function mostly used in the translation (language Translator) purpose and would return the Users preferred Viewing Locale. <ul style="list-style-type: none">• The string parameter can be a string in any formula (for example, in a cell, an alerter message or a variable definition).• When designing a report, you can use the comment parameter to provide further information to help Translators translate the string. The comment appears with the string in the Translation Manager tool which translators use to translate reports.	string GetLocalized(string[;comment])	=GetLocalized("Sales Revenue";"Max 20 characters")	Sales Revenue
Get Preferred Viewing Locale	User's preferred locale for viewing document data (the Preferred Viewing Locale)	string GetPreferredViewingLocale()	=GetPreferredViewingLocale()	en
HTML Encode	Applies HTML encoding rules to a string	string HTMLEncode(html)	=HTMLEncode("http://www.sap.com")	http://www.sap.com
If Then Else	Returns a value based on whether an expression is true or false	If bool_value Then true_value [Else false_value]	=If(10 >5) Then "TRUE" Else "FALSE" =If(10 >11) Then "TRUE" Else If(5 >7) Then "TRUE" Else "FALSE"	TRUE FALSE
Init Cap	Capitalizes the First letter of the String	String InitCap(string)	=InitCap("report")	Report
Interpolation	Calculates empty measure values by interpolation. <ul style="list-style-type: none">•Interpolation is particularly	num Interpolation(measure[;PointToPoint Linear])	=Intepolation([Measurement])	Country Measure Interpolation

	<p>useful when you create a line graph on a measure that contains missing values. By using the function you ensure that the graph plots a continuous line rather than disconnected lines and points.</p> <ul style="list-style-type: none">Linear regression with least squares interpolation calculates missing values by calculating a line equation in the form $f(x) = ax + b$ that passes as closely as possible through all the available values of the measure.Point-to point interpolation calculates missing values by calculating a line equation in the form $f(x) = ax + b$ that passes through the two adjacent values of the missing value.The sort order of the measure impacts the values returned by Interpolation.You cannot apply a sort or a ranking to a formula containing Interpolation.If there is only one value in the list of values, Interpolation uses this value to supply all the missing values.Filters applied to an interpolated measure can change the values returned by Interpolation depending on which values the filter impacts.	<p>[;NotOnBreak (reset _dims)][;Row Col])</p> <p>“Measure” – Any measures</p> <p>“PointTo-Point Linear” - The interpolation method: Keyword</p> <ul style="list-style-type: none">PointToPoint - point-to-point interpolationLinear - linear regression with least squares Interpolation. <p>By Default “PointToPoint” would be taken.</p> <p>“NotOnBreak reset_dims” –</p> <ul style="list-style-type: none">NotOnBreak - prevents the function from resetting the calculation on block and section breaksreset_dims - the list of dimensions used to reset the interpolation <p>“Row Col” - Sets the calculation direction</p> <p>By Default “Row” would be taken.</p>		<table><tr><td></td><td>m e n t</td><td>a t i o n ([M e a s u r e m e n t])</td></tr><tr><td>USA</td><td>12</td><td>12</td></tr><tr><td>CANADA</td><td></td><td>13</td></tr><tr><td>JAPAN</td><td>14</td><td>14</td></tr><tr><td>INDIA</td><td>15</td><td>15</td></tr><tr><td>CHINA</td><td></td><td>16</td></tr><tr><td>UK</td><td></td><td>17</td></tr><tr><td>GERMANY</td><td>18</td><td>18</td></tr></table>		m e n t	a t i o n ([M e a s u r e m e n t])	USA	12	12	CANADA		13	JAPAN	14	14	INDIA	15	15	CHINA		16	UK		17	GERMANY	18	18
	m e n t	a t i o n ([M e a s u r e m e n t])																										
USA	12	12																										
CANADA		13																										
JAPAN	14	14																										
INDIA	15	15																										
CHINA		16																										
UK		17																										
GERMANY	18	18																										
Is Date	Validate / Check whether a value is a Date	Bool IsDate(obj)	<p>=IsDate("12/24/2013")</p> <p>=IsDate(CurrentDate())</p>	<p>0 –FALSE (Value is not an Date)</p> <p>1- TRUE (Value is a Date)</p>																								
Is Error	Validate / Check whether a returns an error	Bool IsError(obj)	<p>=IsError(100/0)</p> <p>=IsError(100/10)</p>	<p>1 – 100/0 would return ERROR in the report</p> <p>0 – 100/10 would returns 10 and there is no error</p>																								
Is Logical	Determines whether a value is	Bool IsLogical(obj)	=IsLogical(IsString([1 - TRUE																								

	Boolean. • IsLogical returns a boolean value that you can use in the If function. • If you place IsLogical directly into a column, it returns an integer (1=true; 0=false). You can format this integer using a Boolean number format.		Country)))	
Is Null	Determines whether a value is null	Bool IsNull(obj)	=If (IsNull([Sales])) then 0 else [Sales]	Return the value based on the Sales object data
Is Number	Determines whether a value is a number	Bool IsNumber(obj)	=If (IsNumber([Sales])) then 0 else [Sales]	Return the value based on the Sales object data
Is Prompt Answered	Returns whether a prompt has been answered. Must enclose the name of the data provider in square brackets.	Bool IsPromptAnswered([dp];prompt_string)	=IsPromptAnswered("Enter Country Name")	1 – TRUE - if the prompt identified by the text "Enter Country Name" has been answered.
Is String	Determines whether a value is String	Bool IsString(obj)	=If (IsString([Country Code])) then "TRUE" else "FALSE"	Return the value based on the Sales object data
Is Time	Determines whether a value is a Time	Bool IsTime(obj)	=IsTime(CurrentTime())	1 – Return TRUE
Last	Returns the Last value in a data set (dimension or Measure Objects). Used in a break footer, Last returns the Last value in the in the break. Used in a section footer, Last returns the Last value in the section. Used in a table footer, Last([Sales]) returns the Last value of [Sales] in the table.	input_type Last(dimension measure)	=Last([Country]) =Last([Sales])	YEMAN – Last value of Country Object. 2364.55 – Last value of the Sales Measure based on your Query data set.
Last Day Of Month	Date of the last day in a month	Date LastDayOfMonth(date)	=LastDayOfMonth(CurrentDate())	12/31/13
Last Day Of Week	Date of the last day in a Week. The function treats Monday as the first day of the week.	Date LastDayOfWeek(date)	=LastDayOfWeek(CurrentDate())	12/29/13
Last Execution Date	The Date on which a Data Provider was last refreshed	date LastExecutionDate([dp])	=LastExecutionDate([Sales])	12/24/13
Last Execution Duration	Time in seconds taken by the last refresh of a data provider	num LastExecutionDuration(dp)	=LastExecutionDuration([Sales])	40 Seconds
Last Execution Time	Returns a time when a data provider was last refreshed	time LastExecutionTime(d	=LastExecutionTime([Sales])	4:29:54 PM

		p)		
Left	The leftmost characters of a string. The number of characters to return from the left.	string Left(string;num_characters)	=Left("SAP Business Objects";5) =Left([Country];3)	SAP B AUS for Austria
Left Pad	Pads a string on its left with another string. • If length is less than the length of left_string and padded_string combined, left_string is truncated. • If length is less than or equal to the length of padded_string, the function returns padded_string. • If length is greater than the lengths of padded_string and left_string combined, left_string is repeated or partially repeated enough times to fill out the length	string LeftPad(padded_string;length;left_string)	=LeftPad("South";10;"West ") =LeftPad("South";11;"West ") =LeftPad("South";4;"West ")	West South West WSouth South – Left string length is less than Padded String and Left String is truncated and it will display only the Padded String
Left Trim	Trims the leading spaces from a String	string LeftTrim(trimmed_string)	=LeftTrim(" SAP BO") =LeftTrim([Country])	SAP BO USA – if Country Object Has values as " USA"
Length	Number of characters in a string	Int Length(string)	=Length("Web Intelligence Report")	23
Line Number	Line Number in a Block	Int LineNumber()	=LineNumber()	2 – Which row the function is used. If it used in a table in will increase the numbers based on the No. of rows
Ln	Natural logarithm of a number	Num Ln(number)	=Ln(20)	3
Log	Logarithm of a number in a specified base	num Log(number;base)	=Log(100;5)	2.86
Log10	Base 10 logarithm of a number	Num Log10(number)	=Log10(10)	1
Lower	Converts a string to lower case	string Lower(string)	=Lower("SAP")	sap
Match	Check whether a string matches a pattern. The pattern can contain the wildcards "*" (replaces any set of characters) or "?" (Replaces any single character).	Bool Match(test_string;pattern)	=Match("SAP Business Objects";"*B*")	1 – There is a matching pattern for "B"
Max	Largest value in a set of values	Input_type Max(Dimension Measure)	=Max([Country])	USA
Median	Return Middle Value of a	Num	= Median([Sales])	312,345 - If [Sales] has

	Measure. If the set of numbers has an even number of values, Median takes the average of the middle two values.	Median(Measure)		the values of 54202, 312345, and 4233490.
Min	Smallest value in a set of values	Input_type Min(Dimension Measure)	=Min([Country])	AUSTRIA
Mod	Remainder Number from the division of two numbers	Num Mod(dividend;divisor)	=Mod(102;23) =Mod(10;3)	10 1
Mode	Most frequently-occurring value in a data set. Mode returns null if the data set does not contain one value that occurs more frequently than all the others.	Input_type Mode(dimension measure)	=Mode([Sales]) =Mode([Country])	20 – If [Sales] has values of 10, 5, 20,15,20 USA – If [Country] has most frequent values of USA
Month	Returns the Month name of the Date	String Month(date)	=Month(CurrentDate())	December
Month Number Of Year	Returns the Month Number of the Date.	Int MonthNumberOfYear(date)	=MonthNumberOfYear(CurrentDate())	12
Months Between	Return the Number of months between two dates	Int MonthsBetween(first_date;last_date)	=MonthsBetween([Sales Date]; CurrentDate())	5 – If [Sales Date] is 24-Jun-2013 and Current Date is 24-Dec-2013
Name Of	Return the Name of an Object and this function used to display the Object Name in Table Headers.	String NameOf(obj)	=NameOf([Country])	Country
No Filter	Ignore the Filters applied in the table / block while doing the calculation. • NoFilter(obj;Drill) does not work in query drill mode because the drill filters are added to the query rather than applied to the report data. • If you end drill mode with drill filters applied, the drill filters become report filters and can change the value of any objects to which NoFilter(obj;Drill) is applied	Input_type NoFilter(obj[;All Drill])	= NoFilter(Sum([Sales]))	Returns the total sales revenue of all possible rows in the block, even when rows are filtered out of the block.
Number Of Data Providers	Return the Number of Data Providers available in a report	Int NumberOfDataProviders()	= NumberOfDataProviders()	3 – The report has 3 Data Providers.
Number Of Pages	Return the Number Pages of the report	Int NumberOfPages()	=NumberOfPages()	20 – Report has 20 pages
Number Of Rows	Return the Number Rows in a Data Provider	Int NumberOfRows([dp])	=NumberOfRows([Query 1])	200 – Data Provider Query 1 has 200 Rows
Odd	Check whether the given Number is Odd or not	Bool Odd(Number)	=Odd(121) =Odd(140)	1 – TRUE 0 - FALSE
Page	Returns the Current Page	Int Page()	=Page()	1 – First Page of the

	Number of the Report			report																																																								
Percentage	Expresses a measure value as a percentage of its embedding context. By default the embedding context is the measure total in the table. You can make the function take account of a break in a table by using the optional Break argument. You can use the Percentage function across columns or rows; you can specify this explicitly using the optional Row Col argument.	Num Percentage(measure[;Break][;Row Col])	=Percentage([Sales])	<table><tr><td>Year</td><td>Sales</td><td>Perc enta ge</td></tr><tr><td>2001</td><td>1000</td><td>10</td></tr><tr><td>2002</td><td>5000</td><td>50</td></tr><tr><td>2003</td><td>4000</td><td>40</td></tr><tr><td>Sum</td><td>10000</td><td>100</td></tr></table>	Year	Sales	Perc enta ge	2001	1000	10	2002	5000	50	2003	4000	40	Sum	10000	100																																									
Year	Sales	Perc enta ge																																																										
2001	1000	10																																																										
2002	5000	50																																																										
2003	4000	40																																																										
Sum	10000	100																																																										
Percentile	The nth percentile of a measure. The nth percentile is a number that is greater than or equal to n% of the numbers in a set. You express n% in the form 0.n.	Num Percentile(measure;p ercentile) - percentile - A percentage expressed as a decimal	= Percentile([Amount];0.3)	If [Amount] has the set of numbers (100;200;300;400;500) Percentile([Amount];0 .3) returns 220, This is greater than or equal to 30% of the numbers in the set.																																																								
Pos	The starting position of a text pattern in a string	Int Pos(test_string;patte rn)	=Pos("SAP BO" ;"SA")	1																																																								
Power	Number raised to a Power	Num Power(number; power)	=Power(2;2)	4																																																								
Previous	Previous value of an object. • The default value of offset is 1. Previous([Revenue];1) and Previous([Revenue]) are functionally the same. • When you include the NoNull argument, the function returns the first non-null value of the object beginning from the cell offset rows before the current row and counting backwards. • You can use extended syntax context operators with Previous. • The Self operator allows you to refer to the previous value of a cell when it contains content other than one report object. • You must always place dimensions in parentheses even if there is only one dimension in the list of reset dimensions. • When you specify a set of reset dimensions you must	Input_type Previous(dimension measure Self[;(reset _dims)][;offset][;NoN ull])	<div>= Previous([Country];1)</div> <table><tr><td>Country</td><td>Sales</td><td>Previous</td></tr><tr><td>USA</td><td>1000</td><td></td></tr><tr><td>UK</td><td>5000</td><td>USA</td></tr><tr><td>UAE</td><td>4000</td><td>UK</td></tr></table> <div>= Previous([Sales])</div> <table><tr><td>Country</td><td>Sales</td><td>Previous</td></tr><tr><td>USA</td><td>1000</td><td></td></tr><tr><td>UK</td><td>5000</td><td>1000</td></tr><tr><td>UAE</td><td>4000</td><td>5000</td></tr></table> <div>= Previous([Sales];[Country])</div> <table><tr><td>Country</td><td>Region</td><td>Sales</td><td>Previous</td></tr><tr><td>USA</td><td>South</td><td>2000</td><td></td></tr><tr><td></td><td>West</td><td>4000</td><td>2000</td></tr><tr><td></td><td>East</td><td>1000</td><td>4000</td></tr><tr><td>UK</td><td>South</td><td>5000</td><td></td></tr><tr><td></td><td>North</td><td>4000</td><td>5000</td></tr><tr><td>UAE</td><td>North</td><td>3000</td><td></td></tr><tr><td></td><td>East</td><td>5000</td><td>3000</td></tr></table>		Country	Sales	Previous	USA	1000		UK	5000	USA	UAE	4000	UK	Country	Sales	Previous	USA	1000		UK	5000	1000	UAE	4000	5000	Country	Region	Sales	Previous	USA	South	2000			West	4000	2000		East	1000	4000	UK	South	5000			North	4000	5000	UAE	North	3000			East	5000	3000
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UAE	North	3000																																																										
	East	5000	3000																																																									

	<p>separate them with semi-colons.</p> <ul style="list-style-type: none">• Previous is applied after all report, section and block filters, and all sorts, are applied.• You cannot apply sorts or filters on formulas that use Previous.• If Previous is applied on a measure and the measure returns an undefined value, Previous returns an undefined value even if the previous line returned a value.• Previous ignores breaks when placed outside a break header or footer.• Previous returns the value in the previous instance of the footer when placed in a break footer.• Previous is reset in each report section.• When used in a crosstab, Previous does not treat the last value in a row as the previous value of the first value of the next row.		<p>=Previous([Sales]) – in a crosstab report.</p> <table><tr><th>Country</th><th>2012</th><th>Previous</th><th>2013</th><th>Previous</th></tr><tr><td>USA</td><td>2000</td><td></td><td>3000</td><td>2000</td></tr><tr><td>UK</td><td>5000</td><td></td><td>6000</td><td>5000</td></tr><tr><td>UAE</td><td>3000</td><td></td><td>5000</td><td>3000</td></tr></table> <p>=Previous([Sales]);2;NoNull)</p> <table><tr><th>Year</th><th>Quarter</th><th>Sales</th><th>Previous</th></tr><tr><td>2012</td><td>Q1</td><td>2000</td><td></td></tr><tr><td>2012</td><td>Q2</td><td></td><td></td></tr><tr><td>2012</td><td>Q3</td><td>1000</td><td>2000</td></tr><tr><td>2012</td><td>Q4</td><td>5000</td><td>2000</td></tr><tr><td>2013</td><td>Q1</td><td></td><td>1000</td></tr><tr><td>2013</td><td>Q2</td><td></td><td>5000</td></tr><tr><td>2013</td><td>Q3</td><td>5000</td><td>5000</td></tr></table> <p>Note: Above highlighted 2 means, previous function should start after 2nd row of the table.</p>		Country	2012	Previous	2013	Previous	USA	2000		3000	2000	UK	5000		6000	5000	UAE	3000		5000	3000	Year	Quarter	Sales	Previous	2012	Q1	2000		2012	Q2			2012	Q3	1000	2000	2012	Q4	5000	2000	2013	Q1		1000	2013	Q2		5000	2013	Q3	5000	5000
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2013	Q1		1000																																																					
2013	Q2		5000																																																					
2013	Q3	5000	5000																																																					
Product	Multiplies the values of a measure.	Num Product(measure)	=Product([Amount])	180 – If [Amount] has the values of 2,3,5,6 (2*3*5*6)																																																				
Prompt Summary	Returns the prompt text and user response of all prompts in a document.	String PromptSummary()	= PromptSummary()	*** Query Name:Query 1 *** A.) Enter Current Time ID (YYYYMMDD) 20131031 B.) Enter Prior Time ID (YYYYMMDD) 20130930																																																				
Quarter	Quarter Number in a Date	Int Quarter(date)	=Quarter(CurrentDate())	4 – Considering Current Date as 12/24/13																																																				
Query Summary	Returns information about the queries in a document.	string QuerySummary([dp])	<p>= QuerySummary()</p> <p>*** Query Name:dp1 ***</p> <p>** Query Properties: Universe:Index2 Last Refresh Date:12/24/13 4:10 PM Last Execution Duration: 40 Number of rows: 4,208 Retrieve Duplicate Row: ON</p> <p>** Query Definition: Result Objects: Calendar Date, Product Sales Amount, Forecast Sales Amount, Country, Product Type</p>																																																					

			Filters (Time Id Equal 20,130,930) Note: Multiple Data providers should use Data Provider name in the Query Summary or else it will return complete set of Data provider information																																																									
Rank	<p>Ranks a measure by dimensions.</p> <ul style="list-style-type: none">• The function uses the default calculation context to calculate the ranking if you do not specify ranking dimensions.• You must always place dimensions in parentheses even if there is only one dimension in the list of ranking or reset dimensions.• When you specify a set of ranking or reset dimensions you must separate them with semi-colons.• By default the ranking is reset over a section or block break.	<p>Int Rank(measure;[ranking_dims];[Top Bottom];[reset_dims])</p> <p>ranking_dims - The dimensions used to rank the measure</p> <p>Top Bottom – Top is for Descending Order and Bottom is for Ascending Order.</p> <p>reset_dims - The dimensions that reset the ranking</p>	<p>=Ran([sales];([Country]))</p> <table><tr><td>Country</td><td>Sales</td><td>Rank</td></tr><tr><td>USA</td><td>5,63,482</td><td>3</td></tr><tr><td>UK</td><td>9,923,756</td><td>2</td></tr><tr><td>UAE</td><td>10,458,691</td><td>1</td></tr></table> <p>=Ran([sales];([Country]);Bottom) The Bottom argument means that the measures are ranked in descending order.</p> <table><tr><td>Country</td><td>Sales</td><td>Rank</td></tr><tr><td>USA</td><td>5,63,482</td><td>1</td></tr><tr><td>UK</td><td>9,923,756</td><td>2</td></tr><tr><td>UAE</td><td>10,458,691</td><td>3</td></tr></table> <p>=Ran([sales]; ([Country];[Year]);([Country])) The rank is reset on the Country dimension.</p> <table><tr><td>Country</td><td>Year</td><td>Sales</td><td>Rank</td></tr><tr><td>USA</td><td>FY2011Q1</td><td>2,000,000</td><td>1</td></tr><tr><td>USA</td><td>FY2011Q2</td><td>5,000,000</td><td>2</td></tr><tr><td>USA</td><td>FY2011Q4</td><td>6,000,000</td><td>3</td></tr><tr><td>UK</td><td>FY2012Q1</td><td>300,000</td><td>1</td></tr><tr><td>UK</td><td>FY2012Q2</td><td>5,600,000</td><td>2</td></tr><tr><td>UK</td><td>FY2012Q3</td><td>7,900,100</td><td>3</td></tr><tr><td>UAE</td><td>FY2013Q3</td><td>8,000,000</td><td>1</td></tr></table>		Country	Sales	Rank	USA	5,63,482	3	UK	9,923,756	2	UAE	10,458,691	1	Country	Sales	Rank	USA	5,63,482	1	UK	9,923,756	2	UAE	10,458,691	3	Country	Year	Sales	Rank	USA	FY2011Q1	2,000,000	1	USA	FY2011Q2	5,000,000	2	USA	FY2011Q4	6,000,000	3	UK	FY2012Q1	300,000	1	UK	FY2012Q2	5,600,000	2	UK	FY2012Q3	7,900,100	3	UAE	FY2013Q3	8,000,000	1
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Ref Value	Reference value of a report object when data tracking is activated	Input_type RefValue(obj)	= RefValue([Sales])	500 - if the value of the [Sales] measure is 500 in the reference data.																																																								
Ref Value Date	The date of the reference data used for data tracking	Date RefValueDate()	= RefValueDate()	12/24/13																																																								
Ref Value User Response	Response to a prompt when the reference data was the current data. <ul style="list-style-type: none">• The function returns an empty string if data tracking is not activated.• You must enclose the name of the data provider in square brackets.• You can use the DataProvider function to provide a reference to a data provider.• If you selected more than one	String RefValueUserResponse([dp];prompt_string;[Index])	= RefValueUserResponse("Enter Country Name")	USA - if you entered "USA" in the "Enter Country Name" prompt at the time when the reference data was the current data.																																																								

	value in answer to a prompt, the function returns a string consisting of a list of values (or primary keys if the Index operator is specified) separated by semi-colons.																																							
Relative Date	Date relative to another date. The num_days parameter can be negative to return a date earlier than start_date.	Date RelativeDate(start_date;num_days)	=RelativeDate(CurrentDate();10)	1/3/14 – if the current Date in 12/24/13																																				
Relative Value	Returns previous or subsequent values of an object. <ul style="list-style-type: none">• The object must be a measure or a detail of a dimension available in the block.• The sort order of the list of values of the slicing dimensions is used to determine the output of the function. The sort order is determined by two factors: sorts applied to the slicing dimensions, and the order in which the slicing dimensions are listed in the function.• A dimension used as a section master can be specified as a slicing dimension.• All the slicing dimensions must be present in the block or section header of the block in which the function is placed. If a slicing dimension is later removed from the block, the function returns the #COMPUTATION error.• If the offset exceeds the number of rows in the list of values of the slicing dimension, the function returns null.• RelativeValue cannot be used recursively.• You must always place dimensions in parentheses even if there is only one dimension in the list of slicing dimensions.	Input_type RelativeValue(measure detail;slicing_dimensions;offset)	<div>=RelativeValue([Sales];([Year]);-1)</div> <table><tr><th>Year</th><th>Quarter</th><th>Sales</th><th>Rank</th></tr><tr><td>2011</td><td>Q1</td><td>200,000</td><td></td></tr><tr><td>2011</td><td>Q2</td><td>500,000</td><td></td></tr><tr><td>2011</td><td>Q3</td><td>600,000</td><td></td></tr><tr><td>2012</td><td>Q4</td><td>300,000</td><td></td></tr><tr><td>2012</td><td>Q1</td><td>560,000</td><td>200,000</td></tr><tr><td>2012</td><td>Q2</td><td>790,100</td><td>500,000</td></tr><tr><td>2012</td><td>Q3</td><td>800,000</td><td>600,000</td></tr><tr><td>2012</td><td>Q4</td><td>850,00</td><td>300,000</td></tr></table>		Year	Quarter	Sales	Rank	2011	Q1	200,000		2011	Q2	500,000		2011	Q3	600,000		2012	Q4	300,000		2012	Q1	560,000	200,000	2012	Q2	790,100	500,000	2012	Q3	800,000	600,000	2012	Q4	850,00	300,000
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2012	Q4	850,00	300,000																																					
Replace	Replaces part of a string with another string.	String Replace(replace_in;replaced_string;replace_with) replace in - The	=Replace("SAP Business OBJECTS";"OBJECTS";"Objects")	SAP Business Objects																																				

		string in which the text is replaced replaced_string - The text to be replaced replace_with - The text that replaces replaced_string		
Report Filter	Returns the Object information in which report filters applied to an object or report	String ReportFilter(obj)	=ReportFilter([Country])	United States – If filter applied in the report / object where Country = "United States"
Report Filter Summary	Summary of the report filters in a document or report. If report_name is omitted, ReportFilterSummary returns a summary of all the report filters in all the reports (tabs) in the document.	String ReportFilterSummary(report_name)	= ReportFilterSummary() =ReportFilterSummary("Report 2")	*** Filter on Report Report 1 *** No Filter on Report 1 *** Filter on Report Report 2 *** No Filter on Report 2 *** Filter on Report Report 3 *** No Filter on Report 3 *** Filter on Report Report 2 *** No Filter on Report 2
Report Name	Returns Name of the report (Tab Name)	String ReportName()	=ReportName	Report 2 – Tab name where Report Name function is placed
Right	Returns rightmost characters of a string	String Right(string;num_chars)	=Right("SAP Business Objects";7)	Objects – Rightmost 7 Characters displayed.
Right pad	Pads a string on its right with another string. • If length is less than the length of right_string and padded_string combined, right_string is truncated. • If length is less than or equal to the length of padded_string, the function returns padded_string. • If length is greater than the lengths of padded_string and right_string combined, right_string is repeated or partially repeated enough times to fill out the length.	String RightPad(padded_string;length;right_string)	=RightPad("SAP";6;"BO") =RightPad("SAP";8;"BO")	SAP BO SAP BOBO
Right Trim	Trim the trailing spaces from a string	String RightTrim(trimmed_string)	=RightTrim("SAP BO ") =RightTrim([Country])	SAP BO USA – If [Country] has values of "USA ".
Round	Round a Number	Num Round (number;round_level)	=Round(123.45;1) =Round(123.45;-1)	123.5 120

)	=Round(1600;-3)	2000																																
Row Index	Row Number in a Table. Row numbering starts at 0 and RowIndex returns #MULTIVALUE when placed in a table header or footer.	Integer RowIndex()	=RowIndex()	0 – First row of the table.																																
Running Average	Returns the running average of a measure. <ul style="list-style-type: none">You can use extended syntax context operators with RunningAverage.You can set the calculation direction with the Row and Col operators.If you apply a sort on the measure referenced by RunningAverage, the running average is calculated after the measure is sorted.You must always place dimensions in parentheses even if there is only one dimension in the list of reset dimensions.When you specify a set of reset dimensions you must separate them with semi-colons.RunningAverage does not automatically reset the average after a block break or new section.	Num RunningAverage(measure[;Row Col][;IncludeEmpty][;(reset_dims)]) measure - Any measure Row Col - Sets the calculation direction IncludeEmpty - Includes empty values in the calculation reset_dims - Resets the calculation on the specified dimensions	=RunningAverage([Sales]) <table><tr><th>Country</th><th>Region</th><th>Sales</th><th>Running Average</th></tr><tr><td>USA</td><td>East</td><td>3568124</td><td>3568124</td></tr><tr><td>USA</td><td>West</td><td>300456</td><td>1934290</td></tr><tr><td>UK</td><td>North</td><td>8489381</td><td>4119320.3</td></tr></table> =RunningAverage([Sales];([Country])) <table><tr><th>Country</th><th>Region</th><th>Sales</th><th>Running Average</th></tr><tr><td>USA</td><td>East</td><td>3568124</td><td>3568124</td></tr><tr><td>USA</td><td>West</td><td>300456</td><td>1934290</td></tr><tr><td>UK</td><td>North</td><td>8489381</td><td>8489381</td></tr></table>		Country	Region	Sales	Running Average	USA	East	3568124	3568124	USA	West	300456	1934290	UK	North	8489381	4119320.3	Country	Region	Sales	Running Average	USA	East	3568124	3568124	USA	West	300456	1934290	UK	North	8489381	8489381
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Running Count	The running count of a number set. <ul style="list-style-type: none">You can use extended syntax context operators with RunningCount.You can set the calculation direction with the Row and Col operators.If you apply a sort on the measure referenced by RunningCount, the running count is calculated after the measure is sorted.You must always place dimensions in parentheses even if there is only one dimension in the list of reset dimensions.When you specify a set of reset dimensions you must separate them with semi-	Num RunningCount(dimension measure[;Row Col][;IncludeEmpty][;(reset_dims)]) measure - Any measure Row Col - Sets the calculation direction IncludeEmpty - Includes empty values in the calculation reset_dims - Resets the calculation on the specified dimensions	=RunningCount([Sales]) <table><tr><th>Country</th><th>Region</th><th>Sales</th><th>Running Count</th></tr><tr><td>USA</td><td>East</td><td>3568124</td><td>1</td></tr><tr><td>USA</td><td>West</td><td>300456</td><td>2</td></tr><tr><td>UK</td><td>North</td><td>8489381</td><td>3</td></tr></table> =RunningCount([Sales];([Country])) <table><tr><th>Country</th><th>Region</th><th>Sales</th><th>Running Count</th></tr><tr><td>USA</td><td>East</td><td>3568124</td><td>1</td></tr><tr><td>USA</td><td>West</td><td>300456</td><td>2</td></tr><tr><td>UK</td><td>North</td><td>8489381</td><td>1</td></tr></table>		Country	Region	Sales	Running Count	USA	East	3568124	1	USA	West	300456	2	UK	North	8489381	3	Country	Region	Sales	Running Count	USA	East	3568124	1	USA	West	300456	2	UK	North	8489381	1
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	colons. <ul style="list-style-type: none"> RunningCount does not automatically reset the count after a block break or new section. 																																																		
Running Max	Running maximum of a dimension or measure. <ul style="list-style-type: none"> You can use extended syntax context operators with RunningMax. You can set the calculation direction with the Row and Col operators. If you apply a sort on the measure referenced by RunningMax, the running maximum is calculated after the measure is sorted. You must always place dimensions in parentheses even if there is only one dimension in the list of reset dimensions. When you specify a set of reset dimensions you must separate them with semi-colons. RunningMax does not automatically reset the max after a block break or new section. 	Input_type RunningMax(dimension measure; [Row Col]; (reset_dims)) measure - Any measure Row Col - Sets the calculation direction reset_dims - Resets the calculation on the specified dimensions	=RunningMax([Sales]) <table border="1"> <thead> <tr> <th>Country</th><th>Region</th><th>Sales</th><th>Running Max</th></tr> </thead> <tbody> <tr><td>USA</td><td>East</td><td>3568124</td><td>3568124</td></tr> <tr><td>USA</td><td>North</td><td>3000900</td><td>3568124</td></tr> <tr><td>USA</td><td>West</td><td>300456</td><td>3568124</td></tr> <tr><td>UK</td><td>North</td><td>8489381</td><td>8489381</td></tr> <tr><td>UK</td><td>South</td><td>4561090</td><td>8489381</td></tr> </tbody> </table> =RunningMax([Sales];([Country])) <table border="1"> <thead> <tr> <th>Country</th><th>Region</th><th>Sales</th><th>Running Max</th></tr> </thead> <tbody> <tr><td>USA</td><td>East</td><td>3568124</td><td>3568124</td></tr> <tr><td>USA</td><td>North</td><td>3000900</td><td>3568124</td></tr> <tr><td>USA</td><td>West</td><td>300456</td><td>3568124</td></tr> <tr><td>UK</td><td>North</td><td>8489381</td><td>8489381</td></tr> <tr><td>UK</td><td>South</td><td>4561090</td><td>8489381</td></tr> </tbody> </table>	Country	Region	Sales	Running Max	USA	East	3568124	3568124	USA	North	3000900	3568124	USA	West	300456	3568124	UK	North	8489381	8489381	UK	South	4561090	8489381	Country	Region	Sales	Running Max	USA	East	3568124	3568124	USA	North	3000900	3568124	USA	West	300456	3568124	UK	North	8489381	8489381	UK	South	4561090	8489381
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Running Min	Running minimum of a dimension or measure. <ul style="list-style-type: none"> You can use extended syntax context operators with RunningMin. You can set the calculation direction with the Row and Col operators. If you apply a sort on the measure referenced by RunningMin, the running minimum is calculated after the measure is sorted. You must always place dimensions in parentheses even if there is only one dimension in the list of reset dimensions. When you specify a set of reset dimensions you must separate them with semi-colons. 	Input_type RunningMin(dimension measure; [Row Col]; (reset_dims)) measure - Any measure Row Col - Sets the calculation direction reset_dims - Resets the calculation on the specified dimensions	=RunningMin([Sales]) <table border="1"> <thead> <tr> <th>Country</th><th>Region</th><th>Sales</th><th>Running Min</th></tr> </thead> <tbody> <tr><td>USA</td><td>East</td><td>3568124</td><td>3568124</td></tr> <tr><td>USA</td><td>North</td><td>3000900</td><td>3000900</td></tr> <tr><td>USA</td><td>West</td><td>300456</td><td>300456</td></tr> <tr><td>UK</td><td>North</td><td>8489381</td><td>300456</td></tr> <tr><td>UK</td><td>South</td><td>4561090</td><td>300456</td></tr> </tbody> </table> =RunningMin([Sales];([Country])) <table border="1"> <thead> <tr> <th>Country</th><th>Region</th><th>Sales</th><th>Running Min</th></tr> </thead> <tbody> <tr><td>USA</td><td>East</td><td>3568124</td><td>3568124</td></tr> <tr><td>USA</td><td>North</td><td>3000900</td><td>3000900</td></tr> <tr><td>USA</td><td>West</td><td>300456</td><td>300456</td></tr> <tr><td>UK</td><td>North</td><td>8489381</td><td>8489381</td></tr> <tr><td>UK</td><td>South</td><td>4561090</td><td>4561090</td></tr> </tbody> </table>	Country	Region	Sales	Running Min	USA	East	3568124	3568124	USA	North	3000900	3000900	USA	West	300456	300456	UK	North	8489381	300456	UK	South	4561090	300456	Country	Region	Sales	Running Min	USA	East	3568124	3568124	USA	North	3000900	3000900	USA	West	300456	300456	UK	North	8489381	8489381	UK	South	4561090	4561090
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Running Product	<p>Running product of a measure.</p> <ul style="list-style-type: none"> You can use extended syntax context operators with RunningProduct. You can set the calculation direction with the Row and Col operators. If you apply a sort on the measure referenced by RunningProduct, the running product is calculated after the measure is sorted. You must always place dimensions in parentheses even if there is only one dimension in the list of reset dimensions. When you specify a set of reset dimensions you must separate them with semi-colons. RunningProduct does not automatically reset the product after a block break or new section. 	<p>Input_type RunningProduct(dimension measure;[Row Col];[reset_dims])</p> <p>measure - Any measure Row Col - Sets the calculation direction reset_dims - Resets the calculation on the specified dimensions</p>	<p>=RunningProduct([No. of Branch])</p> <table> <tr> <th>Country</th><th>City</th><th>No. of Branch</th><th>Running Product</th></tr> <tr> <td>USA</td><td>LA</td><td>3</td><td>3</td></tr> <tr> <td>USA</td><td>SFO</td><td>5</td><td>15</td></tr> <tr> <td>UK</td><td>London</td><td>40</td><td>600</td></tr> </table>	Country	City	No. of Branch	Running Product	USA	LA	3	3	USA	SFO	5	15	UK	London	40	600																																
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Running Sum	<p>Running product of a measure.</p> <ul style="list-style-type: none"> You can use extended syntax context operators with the RunningSum. You can set the calculation direction with the Row and Col operators. If you apply a sort on the measure referenced by the RunningSum function, the running sum is calculated after the measure is sorted. You must always place dimensions in parentheses even if there is only one dimension in the list of reset dimensions. When you specify a set of reset dimensions you must separate them with semi-colons. RunningSum does not automatically reset the sum 	<p>Num RunningProduct(measure[;Row Col];[reset_dims])</p> <p>measure - Any measure Row Col - Sets the calculation direction reset_dims - Resets the calculation on the specified dimensions</p>	<p>=RunningSum([Sales])</p> <table> <tr> <th>Country</th><th>Region</th><th>Sales</th><th>Running Sum</th></tr> <tr> <td>USA</td><td>East</td><td>3568124</td><td>3568124</td></tr> <tr> <td>USA</td><td>North</td><td>3000900</td><td>6569024</td></tr> <tr> <td>USA</td><td>West</td><td>300456</td><td>6869480</td></tr> <tr> <td>UK</td><td>North</td><td>8489381</td><td>15358861</td></tr> <tr> <td>UK</td><td>South</td><td>4561090</td><td>19919951</td></tr> </table> <p>=RunningSum([Sales];([Country]))</p> <table> <tr> <th>Country</th><th>Region</th><th>Sales</th><th>Running Sum</th></tr> <tr> <td>USA</td><td>East</td><td>3568124</td><td>3568124</td></tr> <tr> <td>USA</td><td>North</td><td>3000900</td><td>6569024</td></tr> <tr> <td>USA</td><td>West</td><td>300456</td><td>6869480</td></tr> <tr> <td>UK</td><td>North</td><td>8489381</td><td>8489381</td></tr> <tr> <td>UK</td><td>South</td><td>4561090</td><td>13050471</td></tr> </table>	Country	Region	Sales	Running Sum	USA	East	3568124	3568124	USA	North	3000900	6569024	USA	West	300456	6869480	UK	North	8489381	15358861	UK	South	4561090	19919951	Country	Region	Sales	Running Sum	USA	East	3568124	3568124	USA	North	3000900	6569024	USA	West	300456	6869480	UK	North	8489381	8489381	UK	South	4561090	13050471
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	after a block break or new section.			
Sign	The sign of a number. Sign returns -1 if number is negative, 0 if number is zero and 1 if number is positive.	Int Sign(number)	=Sign(23) =Sign(-31) =Sign(0)	1 -1 0
Sin	Returns the sine of an angle.	Num Sin(angle)	=Sin(1000) =Sin(-100)	0.83 0.51
Sqrt	Square root of a number.	Num Sqrt(number)	=Sqrt(4)	16
StdDev	The standard deviation of a measure. The standard deviation is a measure of the statistical dispersion in a set of numbers. It is calculated by: <ul style="list-style-type: none"> • finding the average of the set of numbers • subtracting the average from each number in the set and squaring the difference • summing all these squared differences • dividing this sum by (number of numbers in the set - 1) • finding the square root of the result 	Num StdDev(measure)	=StdDev([measure])	2.58 - If measure has the set of values (2, 4, 6, 8).
StdDevP	Population standard deviation of a measure. The population standard deviation is a measure of the statistical dispersion in a set of numbers. It is calculated by: <ul style="list-style-type: none"> • finding the average of the set of numbers; • subtracting the average from each number in the set and squaring the difference; • summing all these squared differences; • dividing this sum by (number of numbers in the set); • finding the square root of the result. You can use extended syntax context operators with StdDevP.	Num StdDevP(measure)	=StdDev([measure])	2.24 - If measure has the set of values (2, 4, 6, 8).
Substr	Returns part of a string	String SubStr(string;start;length) string - Any string	=Substr("SAP Business Objects";1;12) =Substr("SAP	SAP Business Objects

		start - The start position of the extracted string length - The length of the extracted string	Business Objects";14;7)	
Sum	<p>The Sum of a Measure.</p> <ul style="list-style-type: none"> You can use extended syntax context operators with Sum. If you include member_set, Sum returns the sum of the measure for all members in the member set. member_set can include multiple sets separated by semicolons (;). The list of member sets must be enclosed in {}. If the member set expression does not specify a precise member or node, the hierarchy referenced must be present in the table, then the member set expression references the current member in the hierarchy in the table. If the hierarchy is not in the table, the function returns the message #MULTIVALUE. Delegated measure aggregation returns #TOREFRESH when the required aggregation is not available in the query. The user has to refresh the document to get the new level of aggregation. This occurs for example when using the filter bar when the user selects a value before "all values" and vice versa when selecting "all values" before a selected value. When migrating from XIR2 to XIR3, aggregation functions containing IN and WHERE clauses in XI2 queries should be included into Sum function definitely by using parenthesis as follows: In XIR2, the formula: =Sum([Measure] In ([Dim 1])) Where 	Num Sum(measure[;member_set])	=Sum([Sales])	Total Amount should be returned.

	([Dim 3]="Constant") should be expressed as: =Sum([Sales revenue]ForEach([Month]))Where([Month]=1))																																																					
Tan	The tangent of an angle	Num Tan(angle)	=Tan(180)	1.34																																																		
	<p>The TimeDim time dimension allows you to build a time axis from a date type universe object. TimeDim returns the data for the dates given as the first parameter over the time periods given as the second parameter. When there are periods that have no data, the first day of each empty period is returned.</p> <p>This ensures a full axis for the given period. This guarantees:</p> <ul style="list-style-type: none">• That the axis retains the natural time order (oldest objects first, the most recent objects last).• The axis contains all the periods between the minimum and maximum dates in the current context. <p>Use the above function in conjunction with the following functions:</p> <ul style="list-style-type: none">• DayName• DayNumberOfMonth• DayNumberOfWeek• DayNumberOfYear• Month• MonthNumberOfYear• Quarter	<p>TimeDim([Date]; Period)</p> <p>Date - The date object for the report, for example, InvoiceDate.</p> <p>Period - The period for the results, from the following values:</p> <ul style="list-style-type: none">• DayPeriod• MonthPeriod• QuarterPeriod• YearPeriod <p>When no value is selected, the DayPeriod is used by default.</p> <p>This object should be a data provider object, it must be available from report objects, and cannot be a variable.</p>	<p>If we have data for Payment date as mention below:</p> <table><tr><th>Payment Date</th><th>Payment</th></tr><tr><td>1/1/2013</td><td>50,000.00</td></tr><tr><td>1/8/2013</td><td>35,000.00</td></tr><tr><td>7/3/2013</td><td>70,000.00</td></tr></table> <p>Use the TimeDim([Payment Date]) in the above table the axis value for Date will be fill the Null also.</p> <table><tr><th>Payment Date</th><th>Payment</th><th>TimeDim</th></tr><tr><td>1/1/2013</td><td>50000</td><td>1/1/2013</td></tr><tr><td></td><td></td><td>1/2/2013</td></tr><tr><td></td><td></td><td>1/3/2013</td></tr><tr><td></td><td></td><td>1/4/2013</td></tr><tr><td></td><td></td><td>1/5/2013</td></tr><tr><td></td><td></td><td>1/6/2013</td></tr><tr><td></td><td></td><td>1/7/2013</td></tr><tr><td>1/8/2013</td><td>35000</td><td>1/8/2013</td></tr><tr><td></td><td></td><td>1/9/2013</td></tr><tr><td></td><td></td><td>1/10/2013</td></tr><tr><td></td><td></td><td>1/11/2013</td></tr><tr><td></td><td></td><td>1/12/2013</td></tr><tr><td></td><td></td><td>Etc.,</td></tr></table>	Payment Date	Payment	1/1/2013	50,000.00	1/8/2013	35,000.00	7/3/2013	70,000.00	Payment Date	Payment	TimeDim	1/1/2013	50000	1/1/2013			1/2/2013			1/3/2013			1/4/2013			1/5/2013			1/6/2013			1/7/2013	1/8/2013	35000	1/8/2013			1/9/2013			1/10/2013			1/11/2013			1/12/2013			Etc.,	
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To Date	Turns a character string into a date. Give the date format as the parameter to indicate to Web Intelligence how to convert the string into a date. The date format you provide must match the format of the date in the original string. Refer to the link below for the possible date formats.	Date ToDate(date_string;format)	<p>=ToDate("24/12/2013";"dd/MM/yyyy")</p> <p>ToDate("24/12/13";"dd/MM/yy")</p> <p>ToDate("24/12/13";"dd/MMMM/yy")</p>	<p>24/12/2013</p> <p>24/12/13</p> <p>24/DECEMBER/13</p>																																																		
To Number	Returns a string as a number. If string is not a number, ToNumber returns #ERROR.	Num ToNumber(string)	=ToNumber("5454")	5454																																																		
Trim	Trims the leading and trailing spaces from a string	String Trim(string)	=Trim(" SAP BO ")	SAP BO																																																		

Truncate	Truncates a number	Num Truncate(number;truncate_level)	=Truncate(1400;-3)	1000 The function rounds/truncates to the nearest 10 (parameter = -1), 100 (parameter = -2), 1000 (parameter = -3) and so on.
Unique Name Of	Returns the unique name of an object	String UniqueNameOf(obj)	=UniqueNameOf([Payment Date])	Payment Date
Universe Name	The name of the universe on which a data provider is based	String UniverseName(dp)	=UniverseName([Query 1])	Payment – This was the Name of a universe.
Upper	Converts a String to Upper Case	String Upper(string)	=Upper("sap")	SAP
Url Encode	Applies URL encoding rules to a string	String UrlEncode(html)	=UrlEncode("http://www.google.com")	http%3A%2F%2Fwww%2Egoogle%2Ecom
User Response	Returns the response to a prompt. <ul style="list-style-type: none"> You must enclose the name of the data provider in square brackets. You can use the DataProvider function to provide a reference to a data provider. If you select more than one value in answer to a prompt, the function returns a string consisting of a list of values (or primary keys if the Index operator is specified) separated by semi-colons. 	String UserResponse([dp];prompt_string[Index]) dp - The data provider prompt_string - The prompt text Index - Tells the function to return the database primary keys of the prompt values	=UserResponse("Enter Country Name")	USA – If you entered USA in the Prompt
Var	The Variance of a Measure. The variance is a measure of the statistical dispersion in a set of numbers. It is calculated by: <ul style="list-style-type: none"> finding the average of the set of numbers subtracting the average from each number in the set and squaring the difference summing all these squared differences dividing this sum by (number of numbers in the set - 1) The variance is the square of the standard deviation. You can use extended syntax context operators with Var.	Num Var(measure)	=Var([Sales])	6.67 - If Sales has the set of values (2, 4, 6, 8)
VarP	Population variance of a measure.	Num VarP(measure)	=VarP([Sales])	5 - If Sales has the set of values (2, 4, 6, 8)

	<p>The population variance is a measure of the statistical dispersion in a set of numbers. It is calculated by:</p> <ul style="list-style-type: none"> • finding the average of the set of numbers • subtracting the average from each number in the set and squaring the difference • summing all these squared differences • dividing this sum by (number of numbers in the set) <p>The population variance is the square of the population standard deviation.</p> <p>You can use extended syntax context operators with VarP.</p>			
Week	Week Number of the Date	Int Week(date)	=Week(CurrentDate())	2 – Current Date 12/24/13 and Start week is for Monday
Word Cap	Capitalizes the first letter of all the words in a string	String WordCap(string)	=WordCap("Payment due for june")	Payment Due For June
Year	Year in a date	Int Year(date)	=Year(CurrentDate())	2013