MDX Various Queries

How do I find the bottom 10 customers with the lowest sales in 2003 that were not null?	MDX query to get sales by product line for specific period plus number of months with non empty sales.
```SELECT { [Measures].[Internet Sales Amount] } ON COLUMNS , BOTTOMCOUNT(NONEMPTY(DESCENDANTS([Customer].[Customer Geography].[All Customers] , [Customer].[Customer Geography].[Customer]) , ([Measures].[Internet Sales Amount])) , 10 , ([Measures].[Internet Sales Amount])) ON ROWS FROM [Adventure Works] WHERE ([Date].[Calendar].[Calendar Year].&[2003]) ;```	```WITH Member [Measures].[Months With Above Zero Sales] AS COUNT(DESCENDANTS({[Date].[Calendar].[Calendar Year].&[2003]: [Date].[Calendar].[Calendar Year].&[2004]} , [Date].[Calendar].[Month]) * [Measures].[Sales Amount] , ExcludeEmpty) SELECT {[Measures].[Sales Amount], [Measures].[Months With Above Zero Sales]} ON 0 , [Product].[Product Model Lines].[Product Line].Members on 1 FROM [Adventure Works] WHERE ([Date].[Calendar].[Calendar Year].&[2003]: [Date].[Calendar].[Calendar Year].&[2004])```
How do I group dimension members dynamically in MDX?	**How do you write MDX query that returns measure ratio to parent value?**
```WITH MEMBER [Product].[Category].[Case Result 1] AS ' Aggregate(Filter([Product].[Category].[All].children, [Product].[Category].currentmember.Properties("Key") < "3"))' MEMBER [Product].[Category].[Case Result 2] AS ' Aggregate(Filter([Product].[Category].[All].children, [Product].[Category].currentmember.Properties("Key") = "3"))' MEMBER [Product].[Category].[Case Result 3] AS ' Aggregate(Filter([Product].[Category].[All].children, [Product].[Category].currentmember.Properties("Key") > "3"))' SELECT NON EMPTY {[Measures].[Order Count] } ON COLUMNS , {[Product].[Category].[Case Result 1],[Product].[Category].[Case Result 2],[Product].[Category].[Case Result 3] } ON ROWS FROM [Adventure Works]```	```WITH MEMBER [Measures].[Order Count Ratio To Parent] AS IIF(([Measures].[Order Count], [Date].[Calendar].CurrentMember.Parent) = 0 , NULL , [Measures].[Order Count] / ([Measures].[Order Count], [Date].[Calendar].CurrentMember.Parent)) , FORMAT_STRING = "Percent" SELECT {[Measures].[Order Count], [Measures].[Order Count Ratio To Parent]} ON 0 , {DESCENDANTS([Date].[Calendar].[All Periods], 1), [Date].[Calendar].[All Periods] } ON 1 FROM [Adventure Works]```
How in MDX query can I get top 3 sales years based on order quantity?	**How can I compare members from different dimensions that have the same key values?**
```SELECT {[Measures].[Reseller Order Quantity]} ON 0, TopCount([Date].[Calendar].[Calendar Year].Members,3, [Measures].[Reseller Order Quantity]) ON 1 FROM [Adventure Works];```	```SELECT {[Measures].[Internet Order Count]} ON 0 , FILTER(NonEmptyCrossJoin([Ship Date].[Date].Children, [Delivery Date].[Date].Children), [Ship Date].[Date].CurrentMember.Properties('Key') = [Delivery Date].[Date].Properties('Key')) ON 1 FROM [Adventure Works] ;```
How do you extract first tuple from the set?	**How do you extract first member of the tuple?**
```SELECT {{[Date].[Calendar].[Calendar Year].Members}.Item(0)} ON 0 FROM [Adventure Works];```	```SELECT {([Date].[Calendar].[Calendar Year].&[2003] , [Customer].[Customer Geography].[Country].&[Canada]).Item(0) } ON 0 FROM [Adventure Works];```
How do you compare dimension level name to specific value?	**How can I get attribute key with MDX?**
```WITH MEMBER [Measures].[TimeName] AS IIF([Date].[Calendar].Level IS [Date].[Calendar].[Calendar Quarter],'Qtr','Not Qtr') SELECT [Measures].[TimeName] ON 0 FROM [Sales Summary] WHERE ([Date].[Calendar].[Calendar Quarter].&[2004]&[3]);```	```WITH MEMBER Measures.ProductKey as [Product].[Product Categories].Currentmember.Member_Key SELECT {Measures.ProductKey} ON 0, [Product].[Product Categories].Members on 1 FROM [Adventure Works]```

MDX query to get sales by product line for specific period plus number of months with sales
 	
``mdx
WITH Member [Measures].[Months With Non Zero Sales] AS
COUNT(CROSSJOIN([Measures].[Sales Amount]
, DESCENDANTS({[Date].[Calendar].[Calendar
Year].&[2003]: [Date].[Calendar].[Calendar
Year].&[2004]}, [Date].[Calendar].[Month])) ,
ExcludeEmpty)
SELECT {[Measures].[Sales Amount], [Measures].[Months
With Non Zero Sales]} ON 0
, [Product].[Product Model Lines].[Product
Line].Members on 1
FROM [Adventure Works]
WHERE ([Date].[Calendar].[Calendar Year].&[2003]:
[Date].[Calendar].[Calendar Year].&[2004]);
``
	How do I create a Rolling 12 Months Accumulated Sum that can show a trend without seasonal variations?
	
	``mdx
	WITH MEMBER [Measures].[InternetSalesAmtYTD] AS
	SUM(YTD([Date].[Calendar].CurrentMember),[Measures].[In
	ternet Sales Amount]), Format_String = "### ### ###"
	MEMBER [Measures].[InternetSalesAmtPPYTD] AS
	SUM(YTD(ParallelPeriod([Date].[Calendar].[Calendar
	Year],1,[Date].[Calendar].CurrentMember)),
	[Measures].[Internet Sales Amount]), Format_String =
	"### ### ###"
	MEMBER [Measures].[InternetSalesAmtPY] AS
	SUM(Ancestor(ParallelPeriod([Date].[Calendar].[Calendar
	Year],1,[Date].[Calendar].CurrentMember),[Date].[Calend
	ar].[Calendar Year]),
	[Measures].[Internet Sales Amount]),Format_String =
	"### ### ###"
	MEMBER [Measures].[InternetSalesAmtR12Acc] AS
	([Measures].[InternetSalesAmtYTD]+[Measures].[InternetS
	alesAmtPY])- [Measures].[InternetSalesAmtPPYTD]
	Select {[Measures].[Internet Sales Amount],
	Measures.[InternetSalesAmtYTD],
	[Measures].[InternetSalesAmtPPYTD],[Measures].[Internet
	SalesAmtR12Acc]} On 0,
	[Date].[Calendar].[Month].Members On 1
	From [Adventure Works]
	Where ([Date].[Calendar Year].&[2004]);
	``

How can I setup default dimension member in Calculation script?
 	
``mdx
ALTER CUBE [Adventure Works] UPDATE DIMENSION
[Geography].[Geography]
, DEFAULT_MEMBER =
[Geography].[Geography].[Country].&[Canada];
``
	How to setup calculated measure as default measure for a cube?
	
	``mdx
	ALTER CUBE CURRENTCUBE UPDATE DIMENSION Measures,
	DEFAULT_MEMBER=[Measures].[Profit];
	``

How can I create MDX calculated measure that instead of summing children amounts uses last child amount?
 	
``mdx
WITH MEMBER [Measures].[Internet Order Count For End
of Period Below] AS
([Date].[Calendar].CurrentMember.LastChild,
[Measures].[Internet Order Count])
SELECT [Measures].[Internet Order Count For End of
Period Below] ON 0
, [Date].[Calendar].Children ON 1
FROM [Adventure Works];
``
	MDX query for the count of customers for whom the earliest sale in the selected time period (2002 and 2003) occurred in a particular Product Category
	
	``mdx
	WITH SET [FirstSales] AS
	FILTER(NONEMPTY(
	[Customer].[Customer Geography].[Customer].MEMBERS
	* [Date].[Date].[Date].MEMBERS
	, [Measures].[Internet Sales Amount])
	AS MYSET,
	MYSET.CURRENTORDINAL = 1 or
	NOT(MYSET.CURRENT.ITEM(0) IS
	MYSET.ITEM(MYSET.CURRENTORDINAL-2).ITEM(0)))
	Member [Measures].[CustomersW/FirstSales] as
	Count(NonEmpty([FirstSales], [Measures].[Internet Sales
	Amount])),
	FORMAT_STRING = '#,#'
	select {[Measures].[Internet Sales
	Amount],[Measures].[CustomersW/FirstSales]} on 0,
	[Product].[Product Categories].[Category] on 1
	from [Adventure Works]
	where ({[Date].[Calendar].[Calendar Year].&[2002],
	[Date].[Calendar].[Calendar Year].&[2003]},
	[Customer].[Customer
	Geography].[City].&[Calgary]&[AB]);
	``

How to calculate YTD monthly average and compare it over serveral years for the same selected month?
 	
``mdx
WITH MEMBER Measures.MyYTD AS
SUM(YTD([Date].[Calendar]),[Measures].[Internet Sales
Amount])
MEMBER Measures.MyMonthCount AS
SUM(YTD([Date].[Calendar]),(COUNT([Date].[Month of
Year])))
MEMBER Measures.MyYTDAVG AS Measures.MyYTD /
Measures.MyMonthCount
SELECT {Measures.MyYTD,
Measures.MyMonthCount,[Measures].[Internet Sales
Amount],Measures.MyYTDAVG} On 0,
 [Date].[Calendar].[Month] On 1
FROM [Adventure Works]
WHERE ([Date].[Month of Year].&[7])
``	

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