Proj 4
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1. a.

(select
country as Country,isnull(education,'All_Customers') as Education, (GE.Male+GE.Female) as
All_Customers,Female,Male

from
(select

sum(case C.gender when 'M' then 1 else 0 end) as Male, sum(case C.gender when 'F' then 1 else 0 end) as
Female, G.EnglishCountryRegionName as country, C.EnglishEducation as education

from dbo.DimCustomer as C inner join DimGeography as G on C.GeographyKey=G.GeographyKey
where G.EnglishCountryRegionName='France'
group by G.EnglishCountryRegionName, rollup(C.Gender,C.EnglishEducation)) as GE where GE.Male!=0
and GE.Female!=0)

union

(select
country as Country,education as Education, (c.Male+c.Female) as AllCustomers,Female,Male

from
(select

G.EnglishCountryRegionName as country, D.EnglishEducation as education, sum(case D.gender when 'M'
then 1 else 0 end) as Male, sum(case D.gender when 'F' then 1 else 0 end) as Female

from DimCustomer as D inner join DimGeography as G on D.GeographyKey=G.GeographyKey
where G.EnglishCountryRegionName='France'
group by G.EnglishCountryRegionName,D.EnglishEducation, rollup(D.Gender)) as c where c.Male!=0 and
c.Female!=0)

union

(select
country as Country,isnull(education,'All_Customers') as Education, (GE.Male+GE.Female) as
All_Customers,Female,Male

from
(select

```
sum(case C.gender when 'M' then 1 else 0 end) as Male, sum(case C.gender when 'F' then 1 else 0 end) as
Female, G.EnglishCountryRegionName as country, C.EnglishEducation as education

from dbo.DimCustomer as C inner join DimGeography as G on C.GeographyKey=G.GeographyKey
where G.EnglishCountryRegionName='GERMANY'

group by G.EnglishCountryRegionName, rollup(C.Gender,C.EnglishEducation)) as GE where GE.Male!=0
and GE.Female!=0)

union

(select
country as Country,education as Education, (c.Male+c.Female) as AllCustomers,Female,Male

from
(select

G.EnglishCountryRegionName as country, D.EnglishEducation as education, sum(case D.gender when 'M'
then 1 else 0 end) as Male, sum(case D.gender when 'F' then 1 else 0 end) as Female

from DimCustomer as D inner join DimGeography as G on D.GeographyKey=G.GeographyKey
where G.EnglishCountryRegionName='GERMANY'
group by G.EnglishCountryRegionName,D.EnglishEducation, rollup(D.Gender)) as c where c.Male!=0 and
c.Female!=0)
```
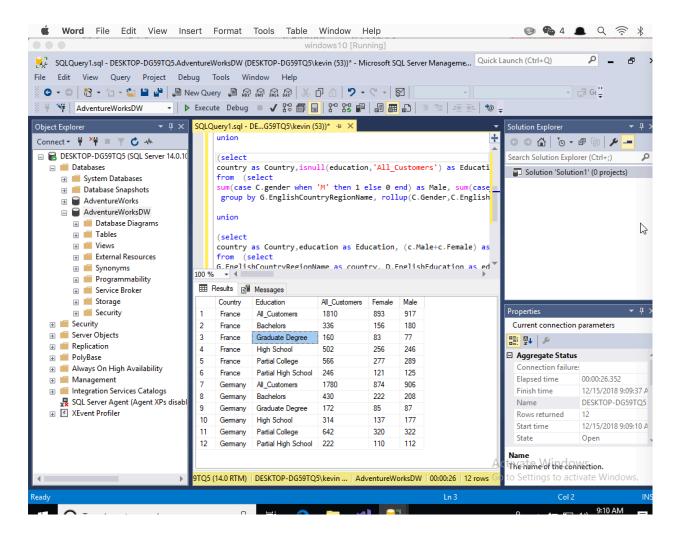
b.

Country	Education	All Customers	Female	Male
France	Bachelors	336	156	180
France	Graduate Degree	160	83	77
France	High School	502	256	246
France	Partial College	566	277	289
France	Partial High School	246	121	125
Germany	Bachelors	430	222	208
Germany	Graduate Degree	172	85	87
Germany	High School	314	137	177
Germany	Partial College	642	320	322

2.

```
select
[Customer].[Gender].[Gender].members on columns,
( { [France], [Germany] }, Customer.education.education.members ) on rows

from [Adventure Works]
where [Measures].[Customer Count]
```

		F	M
France	All	893	917
France	Bachelors	156	180
France	Graduate Degree	83	77
France	High School	256	246
France	Partial College	277	289
France	Partial High School	121	125
Germany	All	874	906
Germany	Bachelors	222	208
Germany	Graduate Degree	85	87
Germany	High School	137	177
Germany	Partial College	320	322
Germany	Partial High School	110	112

3.

```
select
[Customer].[Country].Members on columns,

[Customer].[Education].Members on rows

from [Adventure Works DW]
where ([Measures].[Customer Count] ,[Customer].[Gender].[M]);
```

	All	Australia	Canada	France	Germany	United Kingdom	United States
All	9351	1814	804	917	906	979	3931
Bachelors	2728	843	187	180	208	292	1018
Graduate Degree	1578	152	171	77	87	131	960
High School	1699	302	160	246	177	187	627
Partial College	2522	373	187	289	322	254	1097
Partial High School	824	144	99	125	112	115	229

4.

With Member [Measures].[Male Percent] as ([Measures].[Customer Count],[Customer].[Gender].[M]
/([Measures].[Customer Count]),
format_string = '#.00%'
select [Order Data].[Calendar Year].CHILDREN on columns,{ [Geography].[Country].CHILDREN -
[Geography].[Country].[Unknown]} on rows
from [Adventure Works DW]
Where [Measures].[Male Percent];

	2005	2006	2007	2008	2009	2010	2011	2012	
Australia	50.52%	50.52%	50.52%	50.52%	50.52%	50.52%	50.52%	50.52%	
Canada	51.18%	51.18%	51.18%	51.18%	51.18%	51.18%	51.18%	51.18%	
France	50.66%	50.66%	50.66%	50.66%	50.66%	50.66%	50.66%	50.66%	
Germany	50.90%	50.90%	50.90%	50.90%	50.90%	50.90%	50.90%	50.90%	
United Kingdom	51.18%	51.18%	51.18%	51.18%	51.18%	51.18%	51.18%	51.18%	

5.

select [Measures].[Internet Sales Amount] on columns, non empty ({ [France], [Germany] }, [city].
[city].members) on rows

from [Adventure Works]

France	Bobigny	90204.4535000001
France	Boulogne-Billancourt	14289.2439
France	Boulogne-sur-Mer	11342.9225
France	Cergy	46755.9003
France	Chatou	89830.1988000001
France	Colombes	90268.5149000002
France	Colomiers	54641.7231999999
France	Courbevoie	38809.6307000001
France	Croix	36781.9349000001
France	Drancy	56031.3777999999
France	Dunkerque	75474.3824
France	Les Ulis	181244.7285
France	Lieusaint	57094.8009999999
France	Lille	65419.9324999998
France	Metz	94046.2295000004
France	Morangis	56432.8420999999
France	Orleans	91562.9056000003
France	Orly	28478.1246000001

6.

WITH SET[North America] AS
{Customer.[Country].United States, Customer.[Country].Canada}
SELECT Customer[Education].CHILDREN-Customer.[Education].Unknown} ON

COLUMNS,[North America] ON ROWS FROM[Adventure Works DW] WHERE[Measures].[Order Quantity];

	Bachelors	Graduate Degree	High School	Partial Col
United States	5795	5190	3169	6176
Canada	1701	1872	1328	2012

7.

WITH SET [Top5Product] AS
TOPCOUNT([Product].[Model Name]. CHILDREN, 5 [Measures].[Order Quantity] SELECT [Top5Product]
ON COLUMNS, [Order Date].[English Month Name].CHILDREN ON ROWS
FROM[Adventure Works DW]
WHERE [Measures]. [Sales Amount];

	Sport-100	Water Bottle	Mountain-200	Patch kit	Mountain Tire Tu
April	15640.5299999999	1531.93	484272.006999998	602.270000000001	1197.6
August	19209.51	2020.95	774682.888999998	641.2	1237.52
December	23583.2600000002	2160.67	995906.038399997	638.91	1442.11
February	14590.8299999999	1367.26	376678.007599999	533.570000000002	1142.71
January	14170.9499999999	1377.24	438780.953599999	538.150000000002	1097.8
July	17984.86	1771.45	673309.400599998	613.72	1372.25
June	21063.9800000001	1971.05	763832.577799998	638.91	1332.33
March	16725.2199999999	1591.81	472974.020399999	545.020000000001	1317.36
May	18299.77	1556.88	532349.298199998	618.3	1307.38
November	22778.4900000002	1916.16	930637.926999997	634.33	1292.41
October	21728.7900000002	2035.92	785240.879599998	719.059999999999	1372.25
September	19559.4100000001	1876.24	700811.245199998	583.950000000001	1332.33

8.

WITH MEMBER [Measures].[PrevYear] AS
([Measures].[Sales Amount], PARALLELPERIOD([Order Date] [Calendar][Calendar Quarter], 4))

SELECT {[Measures][Sales Amount], [Measures][PrevYear]} ON COLUMNS, NON EMPTY
Customer.[Country], [Order Date].[Calendar].[Calendar Quarter]. MEMBERS) ON ROWS
FROM [Adventure Works DW];

Australia	4	20909.78	(null)
Australia	1	588674.916600001	(null)
Australia	2	699462.501200001	(null)
Australia	3	631289.075800001	(null)
Australia	4	644305.755700001	20909.78
Australia	1	396321.817	588674.9166000
Australia	2	485812.0225	699462.5012000
Australia	3	606714.264300001	631289.0758000
Australia	4	639559.3513	644305.7557000
Australia	1	742731.429999984	396321.817
Australia	2	1052361.96999998	485812.0225
Australia	3	1212587.86999998	606714.2643000
Australia	4	1331762.10999998	639559.3513
Australia	1	8507.71999999995	742731.4299999
Australia	2	(null)	1052361.969999