Sql Solutions:

1.

```sql
SELECT DATENAME(MM,HireDate) as Month_Name,
    COUNT(BusinessEntityID) AS NumberOfEmployees_hired
from HumanResources.Employee
group by DATENAME(mm,HireDate),MONTH(HireDate)
```

Results   Messages

	Month_Name ∨	NumberOfEmployees_hired ∨
1	January	85
2	February	78
3	March	26
4	April	1
5	May	14
6	June	1
7	September	1
8	November	1
9	December	83

2.

```sql
select b.Name, count(c.BusinessEntityID), YEAR(a.HireDate) from HumanResources.Employee a ,
 HumanResources.Department b, HumanResources.EmployeeDepartmentHistory c
where b.DepartmentID = c.DepartmentID and a.BusinessEntityID = c.BusinessEntityID GROUP by
YEAR(a.HireDate),b.Name
```

Results   Messages

	Name ∨	(No column name) ∨	(No column name) ∨
1	Document Control	1	2008
2	Document Control	4	2009
3	Engineering	2	2007
4	Engineering	3	2008
5	Engineering	1	2010
6	Engineering	1	2011
7	Executive	2	2009
8	Facilities and Maintenance	1	2008
9	Facilities and Maintenance	2	2009
10	Facilities and Maintenance	4	2010
11	Finance	2	2008

3.
```sql
Select a.BusinessEntityID,a.FirstName,a.MiddleName,a.LastName,b.Name from Person.Person a ,
(select a.BusinessEntityID,a.AddressID,b.StateProvinceID,c.CountryRegionCode,d.Name from Pe
rson.BusinessEntityAddress a left join Person.Address b
on a.AddressID = b.AddressID LEFT join Person.StateProvince c on c.StateProvinceID = b.Stat
eProvinceID left join Person.CountryRegion d on d.CountryRegionCode = c.CountryRegionCode)
b
where a.BusinessEntityID = b.BusinessEntityID and  a.FirstName like 'S%' and a.BusinessEnti
tyID not in (SELECT BusinessEntityID FROM HumanResources.Employee)
```

Results   Messages

	BusinessEntityID	FirstName	MiddleName	LastName	country_name
1	2859	Sydney	NULL	Ramirez	Canada
2	2883	Sydney	M	Powell	Canada
3	2884	Sydney	NULL	Long	Canada
4	3041	Summer	M	Prasad	Canada
5	3066	Stephanie	NULL	Sanchez	Canada
6	3081	Stephanie	NULL	Cooper	Canada
7	3086	Stephanie	A	Ward	Canada
8	3099	Stephanie	A	Sanders	Canada
9	3100	Stephanie	NULL	Price	Canada
10	3109	Stephanie	L	Henderson	Canada
11	3110	Stephanie	NULL	Coleman	Canada
12	3121	Stephanie	NULL	Hughes	Canada
13	3123	Stephanie	NULL	Flores	Canada

5.
```sql
select distinct a.ProductID,a.Name,b.cost as Total_Cost,c.quantity as Total_Quantity from P
roduction.Product a,
(select ProductID, sum(ActualCost) as cost,TransactionDate from Production.TransactionHisto
ry group by TransactionDate, ProductID) b,
(select ProductID, sum(Quantity) as quantity,TransactionDate from Production.TransactionHis
tory GROUP by TransactionDate, ProductID) c
where a.ProductID = b.ProductID and c.ProductID = a.ProductID
```

Results   Messages

	ProductID	Name	Total_Cost	Total_Quantity
1	949	LL Crankset	1168.7634	29
2	973	Road-350-W Yellow, 40	31094.0972	9
3	929	ML Mountain Tire	216.501	550
4	870	Water Bottle - 30 oz.	227.544	10
5	998	Road-750 Black, 48	1079.98	101
6	998	Road-750 Black, 48	2159.96	101
7	972	Touring-2000 Blue, 54	13120.38	2
8	895	LL Touring Frame - Blue, 50	1480.3848	66
9	928	LL Mountain Tire	107.2155	555
10	939	ML Road Pedal	735.1456	1100
11	979	Touring-3000 Blue, 50	6413.904	56

7.

```
select distinct  f.FirstName + ' ' + f.MiddleName+ ' ' + ' ' + f.LastName as Cust_name, a.D
iscountPct, b.ProductID from Sales.SpecialOffer a, Sales.SpecialOfferProduct b,Sales.SalesO
rderDetail c, Sales.SalesOrderHeader d,
Sales.Customer e , Person.Person f
 where a.SpecialOfferID = b.SpecialOfferID and c.ProductID = b.ProductID and d.SalesOrderID
 = c.SalesOrderID and
 e.CustomerID = d.CustomerID and f.BusinessEntityID = e.CustomerID and
 a.DiscountPct = (select max(DiscountPct) from  Sales.SpecialOffer  ) order by Cust_name de
sc
```

Results   Messages

	Cust_name	DiscountPct	ProductID
1	Zachary J Jones	0.50	929
2	Zachary A Walker	0.50	928
3	Xavier T Washington	0.50	930
4	Xavier R Cox	0.50	929
5	Xavier M Kelly	0.50	930
6	Xavier L Rivera	0.50	930
7	Xavier K Henderson	0.50	930
8	Xavier G Ramirez	0.50	930
9	Xavier D Watson	0.50	929
10	Wyatt V Simmons	0.50	928
11	Wyatt M Hayes	0.50	930

9.

```sql
select  a.FromCurrencyCode, b.Name, a.EndOfDayRate, ROW_NUMBER() OVER(ORDER BY a.EndOfDayRate) RowNumber from Sales.CurrencyRate a join
Sales.Currency b on a.FromCurrencyCode = b.CurrencyCode
```

Results   Messages

	FromCurrencyCode	Name	EndOfDayRate	RowNumber
1	USD	US Dollar	0.6041	1
2	USD	US Dollar	0.6054	2
3	USD	US Dollar	0.6062	3
4	USD	US Dollar	0.6065	4
5	USD	US Dollar	0.6069	5
6	USD	US Dollar	0.607	6
7	USD	US Dollar	0.6071	7
8	USD	US Dollar	0.6075	8
9	USD	US Dollar	0.6076	9
10	USD	US Dollar	0.6086	10
11	USD	US Dollar	0.6092	11
12	USD	US Dollar	0.6096	12

10.

```sql
select distinct a.SalesOrderID,a.CreditCardID,a.OrderDate,c.ProductID,d.Name from  sales.SalesOrderHeader a, Sales.CreditCard b, Sales.SalesOrderDetail c,
Production.Product d
 where a.CreditCardID  =b.CreditCardID and month(a.OrderDate) = b.ExpMonth and a.SalesOrderID = c.SalesOrderID and
 d.ProductID = c.ProductID and
 a.OnlineOrderFlag = 1
```

Results   Messages

	SalesOrderID	CreditCardID	OrderDate	ProductID	Name
1	43829	3742	2011-06-28 00:00:00.000	749	Road-150 Red, 62
2	43927	10726	2011-07-03 00:00:00.000	753	Road-150 Red, 56
3	44028	3004	2011-07-23 00:00:00.000	751	Road-150 Red, 48
4	44035	8507	2011-07-24 00:00:00.000	751	Road-150 Red, 48
5	44454	8127	2011-09-26 00:00:00.000	749	Road-150 Red, 62
6	44633	17458	2011-10-11 00:00:00.000	749	Road-150 Red, 62
7	44722	1017	2011-10-28 00:00:00.000	749	Road-150 Red, 62
8	44901	5197	2011-11-13 00:00:00.000	752	Road-150 Red, 52
9	45392	14147	2012-01-07 00:00:00.000	771	Mountain-100 Silver, 38
10	45427	5086	2012-01-13 00:00:00.000	776	Mountain-100 Black, 42
11	45726	643	2012-02-20 00:00:00.000	752	Road-150 Red, 52

Results   Messages

	SalesOrderID	CreditCardID	OrderDate	ProductID	Name
1	43829	3742	2011-06-28 00:00:00.000	749	Road-150 Red, 62
4					