

1. DimCurrency: 105 rows

DimCustomer: 1000 rows

DimEmployee: 296 rows

DimGeography: 655 rows

DimProduct: 158 rows

DimProductCategory: 4 rows

DimProductSubcategory: 37 rows

DimPromotion: 16 rows

DimSalesTerritory: 11 rows

DimTime: 1000 rows

2. FactInternetSales: 59808 rows

3. Dim precedes all dimension table names. Fact precedes the fact table name.

4. In order to track the heirarchal structure of the company, the DimEmployee table can reference itself using the ParentEmployeeKey. Once that key is NULL it has found the highest ranking employee in the company.

5. Mountain, road, touring bikes

6.

```
SELECT SUM(a.UnitPrice) AS 'Total Sales', b.CalendarYear,  
c.EnglishProductSubcategoryName FROM FactInternetSales a, DimTime b,  
DimProductSubcategory c, DimProduct d WHERE a.ProductKey = d.ProductKey AND  
c.ProductSubcategoryKey = d.ProductSubcategoryKey AND a.OrderDateKey = b.TimeKey AND  
(c.EnglishProductSubcategoryName = 'Mountain Bikes' OR c.EnglishProductSubcategoryName  
= 'Road Bikes' OR c.EnglishProductSubcategoryName = 'Touring Bikes') GROUP BY  
b.CalendarYear, c.EnglishProductSubcategoryName;
```

Sales for road bikes were highest in 2002.

| | Total Sales | CalendarYear | EnglishProductSubcategoryName | |
|---|-------------|--------------|-------------------------------|--|
| ► | 585975.00 | 2001 | Mountain Bikes | |
| | 1562362.00 | 2002 | Mountain Bikes | |
| | 3989373.00 | 2003 | Mountain Bikes | |
| | 3814544.00 | 2004 | Mountain Bikes | |
| | 2680193.00 | 2001 | Road Bikes | |
| | 4967698.00 | 2002 | Road Bikes | |
| | 3951673.00 | 2003 | Road Bikes | |
| | 2919874.00 | 2004 | Road Bikes | |
| | 1417351.00 | 2003 | Touring Bikes | |
| | 2427229.00 | 2004 | Touring Bikes | |
| | | | | |
| | | | | |

7.

```
SELECT SUM(a.UnitPrice) AS 'Total Sales', b.Gender, CONCAT(c.EnglishMonthName,
c.CalendarYear) AS monthyear FROM FactInternetSales a, DimCustomer b, DimTime c
WHERE ProductKey IN (
    SELECT ProductKey FROM DimProduct WHERE ProductSubcategoryKey IN (
        SELECT ProductSubcategoryKey FROM DimProductSubcategory WHERE
        EnglishProductSubcategoryName = 'Mountain Bikes' OR EnglishProductSubcategoryName =
        'Road Bikes' OR EnglishProductSubcategoryName = 'Touring Bikes')) AND a.CustomerKey =
b.CustomerKey AND a.OrderDateKey = c.TimeKey GROUP BY b.Gender, monthyear;
```

Sales were highest for females in June 2004.

| | Total Sales | Gender | monthyear | |
|---|-------------|--------|---------------|--|
| ► | 253347.00 | M | July2001 | |
| | 220013.00 | F | July2001 | |
| | 295145.00 | F | August2001 | |
| | 225433.00 | F | September2001 | |
| | 227888.00 | F | October2001 | |
| | 211016.00 | M | August2001 | |
| | 375485.00 | F | December2001 | |
| | 379995.00 | M | December2001 | |
| | 281570.00 | M | January2002 | |
| | 315140.00 | F | January2002 | |
| | 285409.00 | M | October2001 | |
| | 277318.00 | M | November2001 | |
| | 266642.00 | F | November2001 | |
| | 280305.00 | M | February2002 | |
| | 270474.00 | F | February2002 | |
| | 310958.00 | M | April2002 | |
| | 306433.00 | F | March2002 | |
| | 352694.00 | F | April2002 | |
| | 335380.00 | F | June2002 | |
| | 341343.00 | M | June2002 | |

| | | | | |
|--|-----------|---|---------------|--|
| | 305714.00 | M | May2002 | |
| | 367802.00 | F | May2002 | |
| | 248477.00 | M | September2001 | |
| | 337663.00 | M | March2002 | |
| | 250576.00 | M | July2002 | |
| | 249789.00 | F | July2002 | |
| | 294438.00 | F | August2002 | |
| | 251561.00 | M | August2002 | |
| | 199676.00 | M | October2002 | |
| | 215702.00 | F | October2002 | |
| | 200786.00 | F | September2002 | |
| | 149676.00 | M | September2002 | |
| | 279510.00 | M | December2002 | |
| | 297786.00 | F | December2002 | |
| | 198629.00 | F | January2003 | |
| | 240213.00 | M | January2003 | |
| | 165755.00 | M | November2002 | |
| | 169329.00 | F | November2002 | |
| | 259179.00 | F | February2003 | |
| | 229881.00 | M | February2003 | |

| | | | | |
|--|-----------|---|---------------|--|
| | 224635.00 | F | March2003 | |
| | 260910.00 | M | March2003 | |
| | 298992.00 | M | May2003 | |
| | 263740.00 | F | May2003 | |
| | 266278.00 | M | April2003 | |
| | 240094.00 | F | April2003 | |
| | 301218.00 | F | June2003 | |
| | 253536.00 | M | June2003 | |
| | 422196.00 | M | July2003 | |
| | 443430.00 | F | July2003 | |
| | 388031.00 | M | August2003 | |
| | 383922.00 | F | August2003 | |
| | 547022.00 | F | October2003 | |
| | 452830.00 | M | October2003 | |
| | 477303.00 | M | September2003 | |
| | 454582.00 | F | September2003 | |
| | 582473.00 | F | November2003 | |
| | 534067.00 | M | November2003 | |
| | 818534.00 | F | December2003 | |
| | 816702.00 | M | December2003 | |

| | | | | |
|--|-----------|---|---------------|--|
| | 547022.00 | F | October2003 | |
| | 452830.00 | M | October2003 | |
| | 477303.00 | M | September2003 | |
| | 454582.00 | F | September2003 | |
| | 582473.00 | F | November2003 | |
| | 534067.00 | M | November2003 | |
| | 818534.00 | F | December2003 | |
| | 816702.00 | M | December2003 | |
| | 673708.00 | F | February2004 | |
| | 643198.00 | F | January2004 | |
| | 611277.00 | M | January2004 | |
| | 703614.00 | M | February2004 | |
| | 704327.00 | M | March2004 | |
| | 687611.00 | F | March2004 | |
| | 732339.00 | M | April2004 | |
| | 781593.00 | F | April2004 | |
| | 892596.00 | F | May2004 | |
| | 882562.00 | M | May2004 | |
| | 913734.00 | F | June2004 | |
| | 935088.00 | M | June2004 | |

8.

```
SELECT (SUM(a.UnitPrice)-SUM(ProductStandardCost)) AS 'Profit Margin', b.CalendarYear,
d.ModelName FROM FactInternetSales a, DimTime b, DimProductSubcategory c, DimProduct d
WHERE a.ProductKey = d.ProductKey AND c.ProductSubcategoryKey =
d.ProductSubcategoryKey AND a.OrderDateKey = b.TimeKey AND
(c.EnglishProductSubcategoryName = 'Mountain Bikes' OR c.EnglishProductSubcategoryName
= 'Road Bikes' OR c.EnglishProductSubcategoryName = 'Touring Bikes') AND b.CalendarYear
= '2003' GROUP BY b.CalendarYear, d.ModelName;
```

The Mountain-200 model had the highest profit margin in 2003.

| | Profit Margin | CalendarYear | ModelName | |
|---|---------------|--------------|----------------|--|
| ► | 252039.00 | 2003 | Road-550-W | |
| | 807528.00 | 2003 | Road-250 | |
| | 100048.00 | 2003 | Road-650 | |
| | 1699911.00 | 2003 | Mountain-200 | |
| | 118384.00 | 2003 | Road-750 | |
| | 196524.00 | 2003 | Road-350-W | |
| | 400488.00 | 2003 | Touring-1000 | |
| | 61820.00 | 2003 | Touring-3000 | |
| | 74060.00 | 2003 | Touring-2000 | |
| | 72243.00 | 2003 | Mountain-400-W | |
| | 48646.00 | 2003 | Mountain-500 | |
| | | | | |
| | | | | |
| | | | | |