Jake Greenberg | Project 3 | Data Warehousing

1. Run the following MDX query and show the results.

```
SELECT [Time].[Month].MEMBERS on ROWS,[Measures].[Quantity] on COLUMNS
FROM [SteelWheelsSales]
WHERE [Market].[Country].&[USA]
```

**RESULTS:**

| | QUANTITYORDERED |
|---|---|
| All | 35659 |
| Apr | 2168 |
| Aug | 3879 |
| Dec | 2815 |
| Feb | 2349 |
| Jan | 2436 |
| Jul | 2004 |
| Jun | 1729 |
| Mar | 2552 |
| May | 3008 |
| Nov | 7066 |
| Oct | 4163 |
| Sep | 1490 |
| Unknown | (null) |

2. In the result of the following MDX statement,

```
SELECT CrossJoin({[OrderStatus].[Disputed],
[OrderStatus].[Resolved]}, {[Measures].[Sales],
[Measures].[Quantity]}) ON COLUMNS,
{[Product].[Line].&[Classic Cars], [Product].[Line].&[Planes]} ON ROWS
FROM [SteelWheelsSales]
WHERE ([TIME].[2005])
```

Which one of the statements is correct?

```
       Disputed      Disputed      Resolved      Resolved
       TOTALPRICE    QUANTITYORDERED      TOTALPRICE    QUANTITYORDERED
Classic Cars  26012.87      174    19067.25      234
Planes 3843.84       63     26946.47      372
```

- default measures appear in the result
- the COLUMNS axis only shows the Sales and Quantity measures.
- **the COLUMNS axis is stacked with the [OrderStatus] dimension members ([Disputed] and [Resolved]) and the sales and quantity measures.**
- the COLUMNS axis is stacked with all [OrderStatus] dimension members and the sales and quantity measures.

3. A MDX query without slicers was made against SteelWheelsSales OLAP cube and the following results were shown. Write down the MDX query.

**Results:**

| | All | 2003 | 2004 | 2005 |
|---|---|---|---|---|
| | Sales | Sales | Sales | Sales |
| All | 1.06E+07 | 3677384 | 4987740 | 1980825 |
| Apr | 793286.6 | 201609.5 | 206148.1 | 385528.9 |
| Aug | 659310.5 | 197809.3 | 461501.2 | (null) |
| Dec | 778820.6 | 303494.2 | 475326.5 | (null) |
| Feb | 817721 | 140836.2 | 318698.6 | 358186.3 |
| Jan | 785874.5 | 129753.6 | 316577.4 | 339543.5 |
| Jul | 588542.1 | 225486.2 | 363055.8 | (null) |
| Jun | 538686.8 | 170559.3 | 368127.4 | (null) |
| Mar | 830178.5 | 174504.9 | 242143.1 | 413530.5 |
| May | 950147.8 | 192673.1 | 273438.4 | 484036.3 |
| Nov | 2175769 | 1086721 | 1089048 | (null) |
| Oct | 1142888 | 589963.9 | 552924.3 | (null) |

Sep 584724.1 263973.3 320750.8 (null)

**MDX:**

```
SELECT NON EMPTY ({[DIM TIME].[YEAR ID], [DIM TIME].[YEAR ID].[YEAR ID]},
[Measures].[TOTALPRICE]) ON COLUMNS,
NON EMPTY  {[DIM TIME].[MONTH NAME],[DIM TIME].[MONTH NAME].[MONTH NAME]} ON ROWS
FROM [SteelWheelsSales]
```

4. In an MDX statement, a slicer is specified in which clause
   - SELECT
   - Nested SELECT statements
   - **WHERE**
   - FROM

*Note: The Where clause is only used within a Select clause, so the answer should technically be both…*

5. What statements are true about axis and slicer dimensions?

   - ☐ **Axis dimensions are shown in the row and column headings of the cube result.**
   - ☐ **A dimension can be used as both an axis and a slicer.**
   - ☐ Slicer dimensions are mandatory.
   - ☐ **Slicer dimensions do not appear in the row and column headings of the cube result.**
   - ☐ Axis is a synonym for slicer.

6. Given the following MDX query

```
SELECT CrossJoin({[OrderStatus].[Disputed],
[OrderStatus].[Resolved]}, {[Measures].[Sales],
[Measures].[Quantity]}) ON COLUMNS,
{[Product].[Line].&[Classic Cars], [Product].[Line].&[Planes]} ON ROWS
FROM [SteelWheelsSales]
```

1) Adding the [Time].[Year].[Year] dimension to the Rows axis, getting rid of the empty rows will null values, and displaying the results below

| | | Disputed | | Disputed | | Resolved | | Resolved |
|---|---|---|---|---|---|---|---|---|
| | | TOTALPRICE | | QUANTITYORDERED | | TOTALPRICE | | QUANTITYORDERED |
| Classic Cars | 2003 | (null) | | (null) | | 6732.09 | | 60 |
| Classic Cars | 2005 | 26012.87 | | 174 | | 19067.25 | | 234 |
| Planes | 2004 | (null) | | (null) | | 7586.45 | | 70 |
| Planes | 2005 | 3843.84 | | 63 | | 26946.47 | | 372 |

2) Adding the [Time].[Year].[Year] dimension to the Column axis, getting rid of the empty columns will null values, and displaying the results below

| | Disputed | Disputed | Resolved | Resolved | Resolved | Resolved |
|---|---|---|---|---|---|---|
| | Resolved | Resolved | | | | |
| | TOTALPRICE | QUANTITYORDERED | TOTALPRICE | TOTALPRICE | TOTALPRICE | QUANTITYORDERED |
| | QUANTITYORDERED | QUANTITYORDERED | | | | |
| | 2005 | 2005 | 2003 | 2004 | 2005 | 2003 | 2004 | 2005 |
| Classic Cars | 26012.87 | 174 | 6732.09 | (null) | 19067.25 | 60 | (null) | 234 |
| Planes | 3843.84 | 63 | (null) | 7586.45 | 26946.47 | (null) | 70 | 372 |

7. If no measures appear in the SELECT clause of an MDX statement,

- the statement is not valid.
- the user is prompted for a measure name.
- a WHERE clause is required.
- **the default measure is shown in the cells.**