

DAX Exercises

Start by opening the "DAX Exercises – Start.pbix" file in your Power BI Desktop application.

1. Add a calculated column called [Revenue] to the [Sales] table that calculates revenue amount for each sales transaction by multiplying the number of Units from the [Sales] table by the [Unit Price] from the [ProductDim] table. Hint: use the RELATED function.

Add a table visual to the report canvas that shows Revenue by month.

2. Add a calculated column called [COGS] to the [Sales] table that calculates the cost of goods sold for each sales transaction by multiplying the number of Units from the [Sales] table by the [Unit Cost] from the [ProductDim] table. Hint: use the RELATED function.

Add COGS column to the table visual you created in the previous exercise.

3. Add a measure called [Gross Profit] that calculates the gross profit by subtracting total COGS from total Revenue. Hint: use the SUM function.

Add Gross Profit column to the table visual you created in the previous exercise.

4. Add a measure called [Revenue Last Year] by calculating revenue for the same period a year ago. Hint: use the CALCULATE and SAMEPERIODLASTYEAR functions.

Add Revenue Last Year column to the table visual you created in the previous exercise.

5. Add a measure called [YoY Revenue Change] by calculating the difference between revenue during any given time period and similar time period a year ago.

Add YoY Revenue Change column to the table visual you created in the previous exercise.

6. Add a measure called [YoY Revenue % Change] by calculating the % change in revenue between any given time period and similar time period a year ago.

Add YoY Revenue % Change column to the table visual you created in the previous exercise.

7. Bonus challenge: rewrite the [Gross Profit] measure in such a way that it does require the [Revenue] and [Sales] calculated columns to be created. Hint: use the SUMX function.

Finished Results

Your end results should resemble the following table:

Month	Revenue	COGS	Gross Profit	Revenue Last Year	YoY Revenue Change	YoY Revenue % Change
Jan-14	19,206.92	14,021.05	5,185.87		19,206.92	
Feb-14	32,721.94	23,887.01	8,834.92		32,721.94	
Mar-14	35,165.00	25,670.45	9,494.55		35,165.00	
Apr-14	100,944.23	73,689.29	27,254.94		100,944.23	
May-14	953,578.47	696,112.28	257,466.19		953,578.47	
Jun-14	1,448,434.11	1,057,356.90	391,077.21		1,448,434.11	
Jul-14	1,281,465.32	935,469.68	345,995.64		1,281,465.32	
Aug-14	218,521.45	159,520.66	59,000.79		218,521.45	
Sep-14	31,948.49	23,322.40	8,626.09		31,948.49	
Oct-14	23,295.52	17,005.73	6,289.79		23,295.52	
Nov-14	124,747.56	91,065.72	33,681.84		124,747.56	
Dec-14	330,926.75	241,576.53	89,350.22		330,926.75	
Jan-15	42,044.82	30,692.72	11,352.10	19,206.92	22,837.90	118.90%
Feb-15	229,382.97	167,449.57	61,933.40	32,721.94	196,661.04	601.01%
Mar-15	488,096.33	356,310.32	131,786.01	35,165.00	452,931.33	1288.02%
Apr-15	65,886.29	48,096.99	17,789.30	100,944.23	-35,057.95	-34.73%
May-15	156,161.42	113,997.84	42,163.58	953,578.47	-797,417.05	-83.62%
Jun-15	57,873.28	42,247.49	15,625.78	1,448,434.11	-1,390,560.83	-96.00%
Jul-15	1,121,952.49	819,025.32	302,927.17	1,281,465.32	-159,512.82	-12.45%
Aug-15	942,863.09	688,290.05	254,573.03	218,521.45	724,341.64	331.47%
Sep-15	164,969.28	120,427.57	44,541.71	31,948.49	133,020.79	416.36%
Oct-15	72,399.50	52,851.64	19,547.87	23,295.52	49,103.98	210.79%
Nov-15	219,208.19	160,021.98	59,186.21	124,747.56	94,460.63	75.72%
Dec-15	322,157.19	235,174.75	86,982.44	330,926.75	-8,769.56	-2.65%
Jan-16				42,044.82	-42,044.82	-100.00%
Feb-16				229,382.97	-229,382.97	-100.00%
Mar-16				488,096.33	-488,096.33	-100.00%
Apr-16				65,886.29	-65,886.29	-100.00%
May-16				156,161.42	-156,161.42	-100.00%
Jun-16				57,873.28	-57,873.28	-100.00%
Jul-16				1,121,952.49	-1,121,952.49	-100.00%
Aug-16				942,863.09	-942,863.09	-100.00%
Sep-16				164,969.28	-164,969.28	-100.00%
Oct-16				72,399.50	-72,399.50	-100.00%
Nov-16				219,208.19	-219,208.19	-100.00%
Dec-16				322,157.19	-322,157.19	-100.00%

Answers

1. Revenue = Sales[Units] * RELATED(ProductDim[Unit Price])
2. COGS = Sales[Units] * RELATED(ProductDim[Unit Cost])
3. Gross Profit = SUM(Sales[Revenue]) - SUM(Sales[COGS])
4. Revenue Last Year = CALCULATE(SUM(Sales[Revenue]), SAMEPERIODLASTYEAR(DateDim[Date]))
5. YoY Revenue Change = SUM(Sales[Revenue]) - [Revenue Last Year]
6. YoY Revenue % Change = DIVIDE([YoY Revenue Change], [Revenue Last Year])
7. Gross Profit - Version 2 = SUMX(Sales, Sales[Units] * RELATED(ProductDim[Unit Price])) - SUMX(Sales, Sales[Units] * RELATED(ProductDim[Unit Cost]))