

# Lab 5 DAX Time Series

## Objectives

Time: 15-20 Minutes

1. Create a DAX measure that produces the following measures.
  - a. Sales for the previous year using the **PREVIOUSYEAR** function
  - b. Sales for the previous month using the **DATEADD** function
  - c. Sales year to date using the **TOTALYTD** function
  - d. Last Quarter Sales using the **PARALLELPERIOD** function
  - e. Percent change of the previous year to the current year using the variables command in the formula
  - f. Percent change of the previous month to the current year using the variables command in the formula

## Lab steps

Previous Year	<table><tr><th>Formula</th><th>Format</th></tr><tr><td>Sales Last Year = <b>CALCULATE</b>([Total Sales],<b>PREVIOUSYEAR</b>(Cal_tbl[Date]))</td><td>Currency</td></tr></table>	Formula	Format	Sales Last Year = <b>CALCULATE</b> ([Total Sales], <b>PREVIOUSYEAR</b> (Cal_tbl[Date]))	Currency
Formula	Format				
Sales Last Year = <b>CALCULATE</b> ([Total Sales], <b>PREVIOUSYEAR</b> (Cal_tbl[Date]))	Currency				
Previous Month	<table><tr><th>Formula</th><th>Format</th></tr><tr><td>Sales Previous Month = <b>CALCULATE</b>([Total Sales],<b>DATEADD</b>(Cal_tbl[Date],-1,<b>MONTH</b>))</td><td>Currency</td></tr></table>	Formula	Format	Sales Previous Month = <b>CALCULATE</b> ([Total Sales], <b>DATEADD</b> (Cal_tbl[Date],-1, <b>MONTH</b> ))	Currency
Formula	Format				
Sales Previous Month = <b>CALCULATE</b> ([Total Sales], <b>DATEADD</b> (Cal_tbl[Date],-1, <b>MONTH</b> ))	Currency				
Sales Year to date	<table><tr><th>Formula</th><th>Format</th></tr><tr><td>SalesYTD = <b>TOTALYTD</b>([Total Sales],Cal_tbl[Date])</td><td>Currency</td></tr></table>	Formula	Format	SalesYTD = <b>TOTALYTD</b> ([Total Sales],Cal_tbl[Date])	Currency
Formula	Format				
SalesYTD = <b>TOTALYTD</b> ([Total Sales],Cal_tbl[Date])	Currency				

Create a new Tab titled “Time Series”

Place the new measures into a table visual and place a year slicer visual on the canvas set to the year 2019

Year

2019

Year	Month Short Name	Total Sales	Sales Previous Month	Sales YTD
2019	Jan	\$1,339,434	\$2,169,490	\$1,339,434
2019	Feb	\$2,361,932	\$1,339,434	\$3,701,366
2019	Mar	\$1,542,556	\$2,361,932	\$5,243,922
2019	Apr	\$1,921,687	\$1,542,556	\$7,165,609
2019	May	\$2,856,101	\$1,921,687	\$10,021,710
2019	Jun	\$1,971,537	\$2,856,101	\$11,993,247
2019	Jul	\$2,871,039	\$1,971,537	\$14,864,286
2019	Aug	\$4,368,030	\$2,871,039	\$19,232,316
2019	Sep	\$4,235,252	\$4,368,030	\$23,467,568
2019	Oct	\$2,267,952	\$4,235,252	\$25,735,520
2019	Nov	\$3,385,488	\$2,267,952	\$29,121,008
2019	Dec	\$3,386,696	\$3,385,488	\$32,507,704
Total		\$32,507,704	\$31,290,498	\$32,507,704

Sales % Change previous year.

Sales % Change previous month.

Formula	Format
Sales Previous Year % Change = var CY = [Total Sales] var PY = [Same Period Last Year] RETURN DIVIDE(CY-PY,PY)	Currency

Formula	Format
Sales Previous Month % Change = var CM = [Total Sales] var PM = [sales Previous Month] RETURN DIVIDE(CM-PM,PM)	Currency

<div>1 . Place the new measures into a table visual</div> <div>2 . Add the Total Sales, Year and Sales Last Year measures into a KPI card visual. This visual will provide a conditional format for current year sales compared to the previous year's sales</div>	<div>Total Sales and Sales Last Year by Year</div> <table><tr><th>Year</th><th>Total Sales</th><th>Sales Last Year</th><th>Sales Previous Year % Change</th></tr><tr><td>2019</td><td>\$32,507,704</td><td>\$25,020,677</td><td>29.92%</td></tr><tr><td>Total</td><td>\$32,507,704</td><td>\$25,020,677</td><td>29.92%</td></tr></table> <div><div>\$32.51M✓</div><div>Goal: \$25.02M (+29.92%)</div></div> <div><div>Value</div><div>Total Sales</div><div>Trend axis</div><div>Year</div><div>Target</div><div>Sales Last Year</div></div>	Year	Total Sales	Sales Last Year	Sales Previous Year % Change	2019	\$32,507,704	\$25,020,677	29.92%	Total	\$32,507,704	\$25,020,677	29.92%
Year	Total Sales	Sales Last Year	Sales Previous Year % Change										
2019	\$32,507,704	\$25,020,677	29.92%										
Total	\$32,507,704	\$25,020,677	29.92%										
Last Quarter Sales	<table><tr><th>Formula</th><th>Format</th></tr><tr><td>Last Quarter Sales = CALCULATE([Total Sales],PARALLELPERIOD(Cal_tbl[Date],-1,QUARTER))</td><td>Currency</td></tr></table>	Formula	Format	Last Quarter Sales = CALCULATE([Total Sales],PARALLELPERIOD(Cal_tbl[Date],-1,QUARTER))	Currency								
Formula	Format												
Last Quarter Sales = CALCULATE([Total Sales],PARALLELPERIOD(Cal_tbl[Date],-1,QUARTER))	Currency												

1. Add the Total Sales, Year, Month short name and Last Quarter Sales measures to a Matrix table visual. You will need to disable the filter interaction so that you get all years as displayed

Year	Total Sales	Last Quarter Sales
2017	\$8,080,177	\$3,199,199
Jul	\$489,272	
Aug	\$1,542,883	
Sep	\$1,167,044	
Oct	\$848,376	\$3,199,199
Nov	\$2,328,412	\$3,199,199
Dec	\$1,704,190	\$3,199,199
2018	\$25,020,677	\$22,846,020
Jan	\$716,347	\$4,880,978
Feb	\$1,900,644	\$4,880,978
Mar	\$1,455,187	\$4,880,978
Apr	\$886,504	\$4,072,178
May	\$2,270,625	\$4,072,178
Jun	\$1,678,204	\$4,072,178
Jul	\$2,544,540	\$4,835,333
Aug	\$3,620,805	\$4,835,333
Sep	\$2,892,186	\$4,835,333
Oct	\$1,861,152	\$9,057,531
Nov	\$3,024,993	\$9,057,531
Dec	\$2,169,490	\$9,057,531
2019	\$32,507,704	\$30,523,203
Jan	\$1,339,434	\$7,055,635
Feb	\$2,361,932	\$7,055,635
Mar	\$1,542,556	\$7,055,635
Apr	\$1,921,687	\$5,243,922
May	\$2,856,101	\$5,243,922
Total	\$77,961,013	\$77,961,013

END