

Lab 5 - Phân tích dữ liệu với Calculated columns và DAX Measures

Trong Lab này các bạn sẽ được thực hành về **Calculated columns** và **DAX Measures**. Mở file [Lab 5 - Practice.pbix](#), và thực hiện các nhiệm vụ chính như sau:

- Trong DATA view, tạo mới các calculated columns
- Trong REPORT view, tạo mới các tạo các measures (Sử dụng Matrix visual để kiểm tra kết quả với các đáp án được cung cấp sẵn)
- Lưu lại file thực hành với định dạng .pbix

Lưu ý: Khi mở file thực hành, các bạn sẽ phải cấu hình lại Data Source để phù hợp với nơi các bạn chứa dữ liệu.

1. Trong DATA view, tạo mới các calculated columns

1.1 Trong bảng **AW_Customer_Lookup** thêm cột mới "**Current Age**", cột "**Current Age**" sẽ để thể hiện tuổi của các khách hàng

Đầu tiên, nhấn chuột phải vào bảng muốn thêm cột.

CustomerKey	Prefix	FirstName	LastName	BirthDate	MaritalStatus	Gender	EmailAddress	AnnualIncome	TotalChildren	EducationLevel	Occupation	HomeOwner	Fullname	Username	Domain	Birth
11206	Mr.	Blane	Flares	Friday, September 24, 1948	M	M	blane60@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Blane Flares	blane60	Adventure Works	
11214	Mr.	Charles	Miller	Monday, November 7, 1949	S	M	charles9@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Charles Miller	charles9	Adventure Works	
11227	Mr.	Marshall	Chavez	Sunday, August 12, 1951	S	M	marshall35@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Marshall Chavez	marshall35	Adventure Works	
12093	Mr.	Levi	Chandra	Monday, November 8, 1948	M	M	levi1@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Levi Chandra	levi1	Adventure Works	
12097	Mr.	Sean	Allen	Sunday, November 11, 1949	S	M	sean69@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Sean Allen	sean69	Adventure Works	
12108	Mr.	James	Walker	Thursday, February 23, 1950	M	M	james96@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. James Walker	james96	Adventure Works	
12117	Mr.	Cameron	Yang	Friday, August 5, 1951	M	M	cameron23@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Cameron Yang	cameron23	Adventure Works	
12125	Mr.	Keith	Raje	Friday, June 3, 1951	M	M	keith12@adventure-works.com	\$60,000	2	Partial College	Professional	N	Mr. Keith Raje	keith12	Adventure Works	
12131	Mr.	Richard	Coleman	Sunday, December 5, 1948	M	M	richard51@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Richard Coleman	richard51	Adventure Works	
12134	Mr.	Robert	Lewis	Sunday, August 22, 1948	S	M	robert81@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Robert Lewis	robert81	Adventure Works	
12233	Mr.	Jonathan	Robinson	Wednesday, September 22, 1948	M	M	jonathan72@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Jonathan Robinson	jonathan72	Adventure Works	
12326	Mr.	Robert	Wang	Tuesday, May 25, 1948	M	M	robert36@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Robert Wang	robert36	Adventure Works	
12343	Mr.	Angel	Scott	Sunday, June 24, 1951	M	M	angel38@adventure-works.com	\$60,000	2	Partial College	Professional	N	Mr. Angel Scott	angel38	Adventure Works	
13370	Mr.	Blake	Ross	Monday, March 22, 1948	M	M	blake61@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Blake Ross	blake61	Adventure Works	
13372	Mr.	Isaac	Edwards	Sunday, November 28, 1948	M	M	isaac24@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Isaac Edwards	isaac24	Adventure Works	
13374	Mr.	Marco	Martinez	Thursday, May 20, 1948	M	M	marco18@adventure-works.com	\$60,000	2	Partial College	Professional	N	Mr. Marco Martinez	marco18	Adventure Works	
13375	Mr.	Jason	Kumar	Sunday, April 11, 1948	M	M	jason26@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Jason Kumar	jason26	Adventure Works	
13376	Mr.	Jerry	Rai	Friday, September 3, 1948	M	M	jerry19@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Jerry Rai	jerry19	Adventure Works	
13384	Mr.	Mario	Ashie	Wednesday, October 25, 1950	S	M	mario21@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Mario Ashie	mario21	Adventure Works	
13386	Mr.	Samuel	Patterson	Thursday, January 26, 1950	M	M	samuel9@adventure-works.com	\$60,000	2	Partial College	Professional	N	Mr. Samuel Patterson	samuel9	Adventure Works	
13388	Mr.	Marshall	Shen	Tuesday, June 11, 1950	S	M	marshall23@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Marshall Shen	marshall23	Adventure Works	
13397	Mr.	Adam	Michell	Sunday, April 6, 1950	M	M	adam41@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Adam Michell	adam41	Adventure Works	
13398	Mr.	Edward	Young	Wednesday, March 21, 1951	M	M	edward47@adventure-works.com	\$60,000	2	Partial College	Professional	N	Mr. Edward Young	edward47	Adventure Works	
14401	Mr.	Jose	Kumar	Wednesday, March 9, 1949	M	M	jose22@adventure-works.com	\$60,000	2	Partial College	Professional	N	Mr. Jose Kumar	jose22	Adventure Works	
14403	Mr.	Dylan	Walker	Thursday, June 3, 1950	M	M	dylan53@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Dylan Walker	dylan53	Adventure Works	
14407	Mr.	Thomas	Bryant	Sunday, June 4, 1950	M	M	thomas20@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Thomas Bryant	thomas20	Adventure Works	
14413	Mr.	William	Davis	Friday, November 14, 1951	M	M	william21@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. William Davis	william21	Adventure Works	
15303	Mr.	Eljah	Hayes	Thursday, May 20, 1948	M	M	eljah24@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Eljah Hayes	eljah24	Adventure Works	
15311	Mr.	Jacob	Taylor	Friday, August 26, 1949	M	M	jacob68@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Jacob Taylor	jacob68	Adventure Works	
15312	Mr.	Jason	Sharma	Friday, April 8, 1949	M	M	jason27@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Jason Sharma	jason27	Adventure Works	
15336	Mr.	Marco	Garcia	Thursday, September 21, 1950	M	M	marco15@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Marco Garcia	marco15	Adventure Works	
15339	Mr.	Noah	Zhang	Saturday, July 1, 1950	M	M	noah21@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Noah Zhang	noah21	Adventure Works	
15343	Mr.	Carson	Barnes	Friday, September 7, 1951	M	M	carson21@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Carson Barnes	carson21	Adventure Works	
15368	Mr.	Isaiah	Gonzalez	Sunday, May 1, 1949	M	M	isaiah32@adventure-works.com	\$60,000	2	Partial College	Professional	N	Mr. Isaiah Gonzalez	isaiah32	Adventure Works	
15369	Mr.	Robert	Diaz	Thursday, April 25, 1950	M	M	robert13@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Robert Diaz	robert13	Adventure Works	
15397	Mr.	Steven	Bailey	Wednesday, April 18, 1951	M	M	steven23@adventure-works.com	\$60,000	2	Partial College	Professional	N	Mr. Steven Bailey	steven23	Adventure Works	
15398	Mr.	David	Wilson	Thursday, September 20, 1951	M	M	david65@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. David Wilson	david65	Adventure Works	

Tiếp theo ta sẽ đặt điều kiện để tạo cột:

1 Current Age = YEAR(TODAY()) - AW_Customer_Lookup[BirthYear]														
LastName	BirthDate	MaritalStatus	Gender	EmailAddress	AnnualIncome	TotalChildren	EducationLevel	Occupation	HomeOwner	FullName	Username	Domain	BirthYear	IncomeLevel
Flores	Friday, September 24, 1948	M	M	blake60@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Blake Flores	blake60	Adventure Works	1948	Average
Miller	Monday, November 7, 1949	S	M	charles9@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Charles Miller	charles9	Adventure Works	1949	Average
Chavez	Sunday, August 12, 1951	S	M	marshall35@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Marshall Chavez	marshall35	Adventure Works	1951	Average
Chandra	Monday, November 8, 1948	M	M	levi1@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Levi Chandra	levi1	Adventure Works	1948	Average
Allen	Sunday, November 13, 1949	S	M	sean49@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Sean Allen	sean49	Adventure Works	1949	Average
Walker	Thursday, February 23, 1950	M	M	james96@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. James Walker	james96	Adventure Works	1950	Average
Yang	Friday, August 3, 1951	M	M	cameron23@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Cameron Yang	cameron23	Adventure Works	1951	Average
Raje	Friday, June 1, 1951	M	M	keith17@adventure-works.com	\$60,000	2	Partial College	Professional	N	Mr. Keith Raje	keith17	Adventure Works	1951	Average
Coleman	Sunday, December 5, 1948	M	M	richard61@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Richard Coleman	richard61	Adventure Works	1948	Average
Lewis	Sunday, August 22, 1948	S	M	robert81@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Robert Lewis	robert81	Adventure Works	1948	Average
Robinson	Wednesday, September 22, 1948	M	M	jonathan72@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Jonathan Robinson	jonathan72	Adventure Works	1948	Average
Wang	Tuesday, May 25, 1948	M	M	robert36@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Robert Wang	robert36	Adventure Works	1948	Average
Scott	Sunday, June 24, 1951	M	M	angel38@adventure-works.com	\$60,000	2	Partial College	Professional	N	Mr. Angel Scott	angel38	Adventure Works	1951	Average
Ross	Monday, March 22, 1948	M	M	blake51@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Blake Ross	blake51	Adventure Works	1948	Average
Edwards	Sunday, November 28, 1948	M	M	isaac24@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Isaac Edwards	isaac24	Adventure Works	1948	Average
Martinez	Thursday, May 20, 1948	M	M	marco18@adventure-works.com	\$60,000	2	Partial College	Professional	N	Mr. Marco Martinez	marco18	Adventure Works	1948	Average
Kumar	Sunday, April 11, 1948	M	M	jason26@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Jason Kumar	jason26	Adventure Works	1948	Average
Rai	Friday, September 3, 1948	M	M	jerry19@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Jerry Rai	jerry19	Adventure Works	1948	Average
Ahne	Wednesday, October 25, 1950	S	M	marco21@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Marco Ahne	marco21	Adventure Works	1950	Average
Patterson	Thursday, January 26, 1950	M	M	samuel9@adventure-works.com	\$60,000	2	Partial College	Professional	N	Mr. Samuel Patterson	samuel9	Adventure Works	1950	Average
Shen	Tuesday, June 13, 1950	S	M	marshall23@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Marshall Shen	marshall23	Adventure Works	1950	Average
Mitchell	Sunday, April 8, 1951	M	M	adam41@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Adam Mitchell	adam41	Adventure Works	1951	Average
Young	Wednesday, March 21, 1951	M	M	edward47@adventure-works.com	\$60,000	2	Partial College	Professional	N	Mr. Edward Young	edward47	Adventure Works	1951	Average
Kumar	Wednesday, March 9, 1949	M	M	jose22@adventure-works.com	\$60,000	2	Partial College	Professional	N	Mr. Jose Kumar	jose22	Adventure Works	1949	Average
Walker	Thursday, June 1, 1950	M	M	dylan53@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Dylan Walker	dylan53	Adventure Works	1950	Average
Bryant	Sunday, June 4, 1950	M	M	thomas20@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Thomas Bryant	thomas20	Adventure Works	1950	Average
Davis	Friday, November 16, 1951	M	M	william21@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. William Davis	william21	Adventure Works	1951	Average
Hayes	Thursday, May 20, 1948	M	M	elijah24@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Elijah Hayes	elijah24	Adventure Works	1948	Average
Taylor	Friday, August 26, 1949	M	M	jacob8@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Jacob Taylor	jacob8	Adventure Works	1949	Average
Sharma	Friday, April 8, 1949	M	M	jason27@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Jason Sharma	jason27	Adventure Works	1949	Average
Garcia	Thursday, September 21, 1950	M	M	marco15@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Marco Garcia	marco15	Adventure Works	1950	Average
Zhang	Saturday, July 1, 1950	M	M	noah21@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Noah Zhang	noah21	Adventure Works	1950	Average
Barnes	Friday, September 7, 1951	M	M	carson2@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Carson Barnes	carson2	Adventure Works	1951	Average
Gonzalez	Sunday, May 2, 1949	M	M	isaiah32@adventure-works.com	\$60,000	2	Partial College	Professional	N	Mr. Isaiah Gonzalez	isaiah32	Adventure Works	1949	Average
Diaz	Tuesday, April 25, 1950	M	M	robert33@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Robert Diaz	robert33	Adventure Works	1950	Average
Bailey	Wednesday, April 18, 1951	M	M	steven25@adventure-works.com	\$60,000	2	Partial College	Professional	N	Mr. Steven Bailey	steven25	Adventure Works	1951	Average

Sau đó các bạn nhấn Enter, kết quả:

1 Current Age = YEAR(TODAY()) - AW_Customer_Lookup[BirthYear]														
LastName	BirthDate	MaritalStatus	Gender	EmailAddress	AnnualIncome	TotalChildren	EducationLevel	Occupation	HomeOwner	FullName	Username	Domain	BirthYear	IncomeLevel
Flores	Friday, September 24, 1948	M	M	blake60@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Blake Flores	blake60	Adventure Works	1948	Average
Miller	Monday, November 7, 1949	S	M	charles9@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Charles Miller	charles9	Adventure Works	1949	Average
Chavez	Sunday, August 12, 1951	S	M	marshall35@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Marshall Chavez	marshall35	Adventure Works	1951	Average
Chandra	Monday, November 8, 1948	M	M	levi1@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Levi Chandra	levi1	Adventure Works	1948	Average
Allen	Sunday, November 13, 1949	S	M	sean49@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Sean Allen	sean49	Adventure Works	1949	Average
Walker	Thursday, February 23, 1950	M	M	james96@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. James Walker	james96	Adventure Works	1950	Average
Yang	Friday, August 3, 1951	M	M	cameron23@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Cameron Yang	cameron23	Adventure Works	1951	Average
Raje	Friday, June 1, 1951	M	M	keith17@adventure-works.com	\$60,000	2	Partial College	Professional	N	Mr. Keith Raje	keith17	Adventure Works	1951	Average
Coleman	Sunday, December 5, 1948	M	M	richard61@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Richard Coleman	richard61	Adventure Works	1948	Average
Lewis	Sunday, August 22, 1948	S	M	robert81@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Robert Lewis	robert81	Adventure Works	1948	Average
Robinson	Wednesday, September 22, 1948	M	M	jonathan72@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Jonathan Robinson	jonathan72	Adventure Works	1948	Average
Wang	Tuesday, May 25, 1948	M	M	robert36@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Robert Wang	robert36	Adventure Works	1948	Average
Scott	Sunday, June 24, 1951	M	M	angel38@adventure-works.com	\$60,000	2	Partial College	Professional	N	Mr. Angel Scott	angel38	Adventure Works	1951	Average
Ross	Monday, March 22, 1948	M	M	blake51@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Blake Ross	blake51	Adventure Works	1948	Average
Edwards	Sunday, November 28, 1948	M	M	isaac24@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Isaac Edwards	isaac24	Adventure Works	1948	Average
Martinez	Thursday, May 20, 1948	M	M	marco18@adventure-works.com	\$60,000	2	Partial College	Professional	N	Mr. Marco Martinez	marco18	Adventure Works	1948	Average
Kumar	Sunday, April 11, 1948	M	M	jason26@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Jason Kumar	jason26	Adventure Works	1948	Average
Rai	Friday, September 3, 1948	M	M	jerry19@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Jerry Rai	jerry19	Adventure Works	1948	Average
Ahne	Wednesday, October 25, 1950	S	M	marco21@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Marco Ahne	marco21	Adventure Works	1950	Average
Patterson	Thursday, January 26, 1950	M	M	samuel9@adventure-works.com	\$60,000	2	Partial College	Professional	N	Mr. Samuel Patterson	samuel9	Adventure Works	1950	Average
Shen	Tuesday, June 13, 1950	S	M	marshall23@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Marshall Shen	marshall23	Adventure Works	1950	Average
Mitchell	Sunday, April 8, 1951	M	M	adam41@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Adam Mitchell	adam41	Adventure Works	1951	Average
Young	Wednesday, March 21, 1951	M	M	edward47@adventure-works.com	\$60,000	2	Partial College	Professional	N	Mr. Edward Young	edward47	Adventure Works	1951	Average
Kumar	Wednesday, March 9, 1949	M	M	jose22@adventure-works.com	\$60,000	2	Partial College	Professional	N	Mr. Jose Kumar	jose22	Adventure Works	1949	Average
Walker	Thursday, June 1, 1950	M	M	dylan53@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Dylan Walker	dylan53	Adventure Works	1950	Average
Bryant	Sunday, June 4, 1950	M	M	thomas20@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Thomas Bryant	thomas20	Adventure Works	1950	Average
Davis	Friday, November 16, 1951	M	M	william21@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. William Davis	william21	Adventure Works	1951	Average
Hayes	Thursday, May 20, 1948	M	M	elijah24@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Elijah Hayes	elijah24	Adventure Works	1948	Average
Taylor	Friday, August 26, 1949	M	M	jacob8@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Jacob Taylor	jacob8	Adventure Works	1949	Average
Sharma	Friday, April 8, 1949	M	M	jason27@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Jason Sharma	jason27	Adventure Works	1949	Average
Garcia	Thursday, September 21, 1950	M	M	marco15@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Marco Garcia	marco15	Adventure Works	1950	Average
Zhang	Saturday, July 1, 1950	M	M	noah21@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Noah Zhang	noah21	Adventure Works	1950	Average
Barnes	Friday, September 7, 1951	M	M	carson2@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Carson Barnes	carson2	Adventure Works	1951	Average
Gonzalez	Sunday, May 2, 1949	M	M	isaiah32@adventure-works.com	\$60,000	2	Partial College	Professional	N	Mr. Isaiah Gonzalez	isaiah32	Adventure Works	1949	Average
Diaz	Tuesday, April 25, 1950	M	M	robert33@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Robert Diaz	robert33	Adventure Works	1950	Average
Bailey	Wednesday, April 18, 1951	M	M	steven25@adventure-works.com	\$60,000	2	Partial College	Professional	N	Mr. Steven Bailey	steven25	Adventure Works	1951	Average
Wilson	Thursday, September 20, 1951	M	M	david65@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. David Wilson	david65	Adventure Works	1951	Average

1.2 Trong bảng **AW_Customer_Lookup** thêm cột mới "**Customer Priority**", cột "**Customer Priority**" sẽ thể hiện cho mức độ ưu tiên dành cho khách hàng, nếu khách hàng dưới 50 tuổi và có thu nhập hàng năm lớn hơn 100.000\$ thì sẽ đặt là “Priority” còn lại thì đặt là "Standard".

1 Customer Priority = IF(AW_Customer_Lookup[Current Age] < 50 && AW_Customer_Lookup[AnnualIncome] > 100000, "Priority", "Standard")														
BirthDate	MaritalStatus	Gender	EmailAddress	AnnualIncome	TotalChildren	EducationLevel	Occupation	HomeOwner	FullName	Username	Domains	BirthYear	IncomeLevel	Customer Priority
Friday, September 24, 1948	M	M	blake60@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Blake Flores	blake60	Adventure Works	1948	Average	74 Standard
Monday, November 7, 1949	S	M	charlie9@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Charles Miller	charlie9	Adventure Works	1949	Average	73 Standard
Sunday, August 12, 1951	S	M	marshall35@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Marshall Chavez	marshall35	Adventure Works	1951	Average	71 Standard
Monday, November 8, 1948	M	M	levi1@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Levi Chandra	levi1	Adventure Works	1948	Average	74 Standard
Sunday, November 13, 1949	S	M	sean49@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Sean Allen	sean49	Adventure Works	1949	Average	73 Standard
Thursday, February 23, 1950	M	M	james96@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. James Walker	james96	Adventure Works	1950	Average	72 Standard
Friday, August 3, 1951	M	M	cameron33@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Cameron Yang	cameron23	Adventure Works	1951	Average	71 Standard
Friday, June 1, 1951	M	M	keith17@adventure-works.com	\$60,000	2	Partial College	Professional	N	Mr. Keith Raje	keith17	Adventure Works	1951	Average	74 Standard
Sunday, December 5, 1948	M	M	richard61@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Richard Coleman	richard61	Adventure Works	1948	Average	74 Standard
Sunday, August 22, 1948	S	M	robert81@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Robert Lewis	robert81	Adventure Works	1948	Average	74 Standard
Wednesday, September 22, 1948	M	M	jonathan72@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Jonathan Robinson	jonathan72	Adventure Works	1948	Average	74 Standard
Tuesday, May 25, 1948	M	M	robert36@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Robert Wang	robert36	Adventure Works	1948	Average	74 Standard
Sunday, June 24, 1951	M	M	angel38@adventure-works.com	\$60,000	2	Partial College	Professional	N	Mr. Angel Scott	angel38	Adventure Works	1951	Average	71 Standard
Monday, March 28, 1948	M	M	blake51@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Blake Ross	blake51	Adventure Works	1948	Average	74 Standard
Sunday, November 28, 1948	M	M	isaac24@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Isaac Edwards	isaac24	Adventure Works	1948	Average	74 Standard
Thursday, May 20, 1948	M	M	marco18@adventure-works.com	\$60,000	2	Partial College	Professional	N	Mr. Marco Martinez	marco18	Adventure Works	1948	Average	74 Standard
Sunday, April 11, 1948	M	M	jason26@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Jason Kumar	jason26	Adventure Works	1948	Average	74 Standard
Friday, September 3, 1949	M	M	jerry19@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Jerry Bai	jerry19	Adventure Works	1949	Average	74 Standard
Wednesday, October 25, 1950	S	M	maria21@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Maria Ashe	maria21	Adventure Works	1950	Average	72 Standard
Wednesday, January 26, 1950	M	M	samuel9@adventure-works.com	\$60,000	2	Partial College	Professional	N	Mr. Samuel Patterson	samuel9	Adventure Works	1950	Average	72 Standard
Tuesday, June 13, 1950	S	M	marshall23@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Marshall Shen	marshall23	Adventure Works	1950	Average	72 Standard
Sunday, April 8, 1951	M	M	adam41@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Adam Mitchell	adam41	Adventure Works	1951	Average	71 Standard
Wednesday, March 21, 1951	M	M	edward47@adventure-works.com	\$60,000	2	Partial College	Professional	N	Mr. Edward Young	edward47	Adventure Works	1951	Average	71 Standard
Wednesday, March 9, 1949	M	M	jose22@adventure-works.com	\$60,000	2	Partial College	Professional	N	Mr. Jose Kumar	jose22	Adventure Works	1949	Average	73 Standard
Thursday, May 1, 1950	M	M	dylan53@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Dylan Walker	dylan53	Adventure Works	1950	Average	72 Standard
Sunday, June 4, 1950	M	M	thomas20@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Thomas Bryant	thomas20	Adventure Works	1950	Average	72 Standard
Friday, November 16, 1951	M	M	william21@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. William Davis	william21	Adventure Works	1951	Average	71 Standard
Thursday, May 20, 1948	M	M	elijah24@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Elijah Hayes	elijah24	Adventure Works	1948	Average	74 Standard
Friday, May 26, 1949	M	M	jacob8@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Jacob Taylor	jacob8	Adventure Works	1949	Average	73 Standard
Friday, April 8, 1949	M	M	jason27@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Jason Sharma	jason27	Adventure Works	1949	Average	73 Standard
Thursday, September 21, 1950	M	M	marco15@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Marco Garcia	marco15	Adventure Works	1950	Average	72 Standard
Saturday, July 1, 1950	M	M	noah21@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Noah Zhang	noah21	Adventure Works	1950	Average	72 Standard
Friday, September 7, 1950	M	M	carson2@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Carson Barnes	carson2	Adventure Works	1951	Average	71 Standard
Sunday, May 1, 1949	M	M	isaiah32@adventure-works.com	\$60,000	2	Partial College	Professional	N	Mr. Isaiah Gonzalez	isaiah32	Adventure Works	1949	Average	73 Standard
Tuesday, April 28, 1951	M	M	robert33@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. Robert Diaz	robert33	Adventure Works	1950	Average	72 Standard
Wednesday, April 18, 1951	M	M	steven25@adventure-works.com	\$60,000	2	Partial College	Professional	N	Mr. Steven Bailey	steven25	Adventure Works	1951	Average	71 Standard
Thursday, September 20, 1951	M	M	devi65@adventure-works.com	\$60,000	2	Partial College	Professional	Y	Mr. David Wilson	devi65	Adventure Works	1951	Average	71 Standard

1.3 Trong bảng AW_Product_Lookup, thêm cột mới có tên " Price Point", dựa trên các tiêu chí

- Nếu: ProductPrice > 500 thì “Price Point” = “High”
- Nếu: 100 ≤ ProductPrice ≤ 500 thì “Price Point” = “Mid-Range”
- Nếu: ProductPrice < 100 thì “Price Point” = “Low”

1 Customer Priority = IF(AW_Product_Lookup[ProductPrice] > 500, "High", IF(AW_Product_Lookup[ProductPrice] >= 100 && AW_Product_Lookup[ProductPrice] <= 500, "Mid-Range", "Low")														
ProductKey	ProductSubcategoryKey	ProductSKU	ProductLine	ModelName	ProductDescription	ProductColor	ProductStyle	ProductCost	ProductPrice	DiscountPrice	SKUType	Customer Priority		
223	31	HL-0509	Sport-100 Helmet, Black	Sport-100	Universal fit, well-ventilated, lightweight, snap-on visor.	Black	NA	\$12.09	\$33.64	\$28.59	HL-0509	Low		
253	14	FR-R388-58	LL Road Frame - Black, 58	LL Road Frame	The LL Frame provides a safe comfortable ride, while offer	Black	U	\$176.20	\$297.63	\$252.99	FR-R388	Mid-Range		
256	14	FR-R388-60	LL Road Frame - Black, 60	LL Road Frame	The LL Frame provides a safe comfortable ride, while offer	Black	U	\$176.20	\$297.63	\$252.99	FR-R388	Mid-Range		
259	14	FR-R388-62	LL Road Frame - Black, 62	LL Road Frame	The LL Frame provides a safe comfortable ride, while offer	Black	U	\$176.20	\$297.63	\$252.99	FR-R388	Mid-Range		
279	14	FR-R388-44	LL Road Frame - Black, 44	LL Road Frame	The LL Frame provides a safe comfortable ride, while offer	Black	U	\$176.20	\$297.63	\$252.99	FR-R388	Mid-Range		
282	14	FR-R388-48	LL Road Frame - Black, 48	LL Road Frame	The LL Frame provides a safe comfortable ride, while offer	Black	U	\$176.20	\$297.63	\$252.99	FR-R388	Mid-Range		
285	14	FR-R388-52	LL Road Frame - Black, 52	LL Road Frame	The LL Frame provides a safe comfortable ride, while offer	Black	U	\$176.20	\$297.63	\$252.99	FR-R388	Mid-Range		
296	12	FR-M948-42	HL Mountain Frame - Black, 42	HL Mountain Frame	Each frame is hand-crafted in our Bethel facility to the op	Black	U	\$617.03	\$1,191.17	\$1,032.49	FR-M948	High		
299	12	FR-M948-44	HL Mountain Frame - Black, 44	HL Mountain Frame	Each frame is hand-crafted in our Bethel facility to the op	Black	U	\$699.09	\$1,349.60	\$1,147.18	FR-M948	High		
300	12	FR-M948-46	HL Mountain Frame - Black, 46	HL Mountain Frame	Each frame is hand-crafted in our Bethel facility to the op	Black	U	\$699.09	\$1,349.60	\$1,147.18	FR-M948	High		
301	12	FR-M948-48	HL Mountain Frame - Black, 48	HL Mountain Frame	Each frame is hand-crafted in our Bethel facility to the op	Black	U	\$617.03	\$1,191.17	\$1,032.49	FR-M948	High		
304	12	FR-M948-50	HL Mountain Frame - Black, 50	HL Mountain Frame	Each frame is hand-crafted in our Bethel facility to the op	Black	U	\$617.03	\$1,191.17	\$1,032.49	FR-M948	High		
332	2	BK-R508-58	Road-650 Black, 58	Road-650	Value-priced bike with many features of our top-of-the-li	Black	U	\$413.15	\$699.10	\$594.24	BK-R508	High		
334	2	BK-R508-60	Road-650 Black, 60	Road-650	Value-priced bike with many features of our top-of-the-li	Black	U	\$413.15	\$699.10	\$594.24	BK-R508	High		
336	2	BK-R508-62	Road-650 Black, 62	Road-650	Value-priced bike with many features of our top-of-the-li	Black	U	\$413.15	\$699.10	\$594.24	BK-R508	High		
338	2	BK-R508-44	Road-650 Black, 44	Road-650	Value-priced bike with many features of our top-of-the-li	Black	U	\$413.15	\$699.10	\$594.24	BK-R508	High		
340	2	BK-R508-48	Road-650 Black, 48	Road-650	Value-priced bike with many features of our top-of-the-li	Black	U	\$413.15	\$699.10	\$594.24	BK-R508	High		
342	2	BK-R508-52	Road-650 Black, 52	Road-650	Value-priced bike with many features of our top-of-the-li	Black	U	\$413.15	\$699.10	\$594.24	BK-R508	High		
348	1	BK-M828-38	Mountain-100 Black, 38	Mountain-100	Top-of-the-line competition mountain bike. Performance-	Black	U	\$2,888.09	\$3,374.99	\$2,868.74	BK-M828	High		
349	1	BK-M828-42	Mountain-100 Black, 42	Mountain-100	Top-of-the-line competition mountain bike. Performance-	Black	U	\$2,888.09	\$3,374.99	\$2,868.74	BK-M828	High		
350	1	BK-M828-44	Mountain-100 Black, 44	Mountain-100	Top-of-the-line competition mountain bike. Performance-	Black	U	\$2,888.09	\$3,374.99	\$2,868.74	BK-M828	High		
351	1	BK-M828-48	Mountain-100 Black, 48	Mountain-100	Top-of-the-line competition mountain bike. Performance-	Black	U	\$2,888.09	\$3,374.99	\$2,868.74	BK-M828	High		
358	1	BK-M888-38	Mountain-200 Black, 38	Mountain-200	Serious back-country riding. Perfect for all levels of compe	Black	U	\$1,105.82	\$2,049.10	\$1,742.74	BK-M888	High		
360	1	BK-M888-42	Mountain-200 Black, 42	Mountain-200	Serious back-country riding. Perfect for all levels of compe	Black	U	\$1,105.82	\$2,049.10	\$1,742.74	BK-M888	High		
362	1	BK-M888-46	Mountain-200 Black, 46	Mountain-200	Serious back-country riding. Perfect for all levels of compe	Black	U	\$1,105.82	\$2,049.10	\$1,742.74	BK-M888	High		
364	1	BK-M478-38	Mountain-300 Black, 38	Mountain-300	For true trail addicts. An extremely durable bike that will	Black	U	\$598.44	\$1,079.99	\$937.99	BK-M478	High		
365	1	BK-M478-40	Mountain-300 Black, 40	Mountain-300	For true trail addicts. An extremely durable bike that will	Black	U	\$598.44	\$1,079.99	\$937.99	BK-M478	High		
366	1	BK-M478-44	Mountain-300 Black, 44	Mountain-300	For true trail addicts. An extremely durable bike that will	Black	U	\$598.44	\$1,079.99	\$937.99	BK-M478	High		
367	1	BK-M478-48	Mountain-300 Black, 48	Mountain-300	For true trail addicts. An extremely durable bike that will	Black	U	\$598.44	\$1,079.99	\$937.99	BK-M478	High		
373	2	BK-R898-44	Road-250 Black, 44	Road-250	Aluminum- alloy frame provides a light, stiff ride, whether	Black	U	\$1,120.68	\$2,181.56	\$1,854.33	BK-R898	High		
375	2	BK-R898-48	Road-250 Black, 48	Road-250	Aluminum- alloy frame provides a light, stiff ride, whether	Black	U	\$1,120.68	\$2,181.56	\$1,854.33	BK-R898	High		
377	2	BK-R898-52	Road-250 Black, 52	Road-250	Aluminum- alloy frame provides a light, stiff ride, whether	Black	U	\$1,120.68	\$2,181.56	\$1,854.33	BK-R898	High		
379	2	BK-R898-58	Road-250 Black, 58	Road-250	Aluminum- alloy frame provides a light, stiff ride, whether	Black	U	\$1,120.68	\$2,181.56	\$1,854.33	BK-R898	High		
409	12	FR-M938-38	ML Mountain Frame - Black, 38	ML Mountain Frame-W	The ML frame is a heat-treated aluminum frame made wit	Black	U	\$1,854.33	\$3,448.76	\$2,996.45	FR-M938	High		
410	17	FW-M423	LL Mountain Front Wheel	LL Mountain Front Wheel	Replacement mountain wheel for entry-level rider.	Black	NA	\$26.97	\$60.74	\$51.63	FW-M423	Low		
411	17	FW-M4762	ML Mountain Front Wheel	ML Mountain Front Wheel	Replacement mountain wheel for the casual to serious rid	Black	NA	\$50.82	\$209.02	\$177.67	FW-M4762	Mid-Range		
412	17	FW-M928	HL Mountain Front Wheel	HL Mountain Front Wheel	High-performance mountain replacement wheel.	Black	NA	\$113.30	\$300.22	\$255.19	FW-M928	Mid-Range		

1.4 Trong bảng **AW_Calendar_Lookup**, thêm cột mới “**Short Day**” để trích xuất và viết hoa ba chữ cái đầu tiên từ cột “**Day Name**”.

1 Short Day = UPPER(LEFT(AW_Calendar_Lookup[Day Name],3))

Date	Day Name	Start of Week	Start of Month	Month Name	Start of Year	Year	Short Day
1/1/2016	Friday	12/28/2015	1/1/2016	January	1/1/2016	2016	FRI
1/2/2016	Saturday	12/28/2015	1/1/2016	January	1/1/2016	2016	SAT
1/3/2016	Sunday	12/28/2015	1/1/2016	January	1/1/2016	2016	SUN
1/4/2016	Monday	1/4/2016	1/1/2016	January	1/1/2016	2016	MON
1/5/2016	Tuesday	1/4/2016	1/1/2016	January	1/1/2016	2016	TUE
1/6/2016	Wednesday	1/4/2016	1/1/2016	January	1/1/2016	2016	WED
1/7/2016	Thursday	1/4/2016	1/1/2016	January	1/1/2016	2016	THU
1/8/2016	Friday	1/4/2016	1/1/2016	January	1/1/2016	2016	FRI
1/9/2016	Saturday	1/4/2016	1/1/2016	January	1/1/2016	2016	SAT
1/10/2016	Sunday	1/4/2016	1/1/2016	January	1/1/2016	2016	SUN
1/11/2016	Monday	1/11/2016	1/1/2016	January	1/1/2016	2016	MON
1/12/2016	Tuesday	1/11/2016	1/1/2016	January	1/1/2016	2016	TUE
1/13/2016	Wednesday	1/11/2016	1/1/2016	January	1/1/2016	2016	WED
1/14/2016	Thursday	1/11/2016	1/1/2016	January	1/1/2016	2016	THU
1/15/2016	Friday	1/11/2016	1/1/2016	January	1/1/2016	2016	FRI
1/16/2016	Saturday	1/11/2016	1/1/2016	January	1/1/2016	2016	SAT
1/17/2016	Sunday	1/11/2016	1/1/2016	January	1/1/2016	2016	SUN
1/18/2016	Monday	1/18/2016	1/1/2016	January	1/1/2016	2016	MON
1/19/2016	Tuesday	1/18/2016	1/1/2016	January	1/1/2016	2016	TUE
1/20/2016	Wednesday	1/18/2016	1/1/2016	January	1/1/2016	2016	WED
1/21/2016	Thursday	1/18/2016	1/1/2016	January	1/1/2016	2016	THU
1/22/2016	Friday	1/18/2016	1/1/2016	January	1/1/2016	2016	FRI
1/23/2016	Saturday	1/18/2016	1/1/2016	January	1/1/2016	2016	SAT
1/24/2016	Sunday	1/18/2016	1/1/2016	January	1/1/2016	2016	SUN
1/25/2016	Monday	1/25/2016	1/1/2016	January	1/1/2016	2016	MON
1/26/2016	Tuesday	1/25/2016	1/1/2016	January	1/1/2016	2016	TUE
1/27/2016	Wednesday	1/25/2016	1/1/2016	January	1/1/2016	2016	WED
1/28/2016	Thursday	1/25/2016	1/1/2016	January	1/1/2016	2016	THU
1/29/2016	Friday	1/25/2016	1/1/2016	January	1/1/2016	2016	FRI
1/30/2016	Saturday	1/25/2016	1/1/2016	January	1/1/2016	2016	SAT
1/31/2016	Sunday	1/25/2016	1/1/2016	January	1/1/2016	2016	SUN
2/1/2016	Monday	2/1/2016	2/1/2016	February	2/1/2016	2016	MON
2/2/2016	Tuesday	2/1/2016	2/1/2016	February	2/1/2016	2016	TUE
2/3/2016	Wednesday	2/1/2016	2/1/2016	February	2/1/2016	2016	WED
2/4/2016	Thursday	2/1/2016	2/1/2016	February	2/1/2016	2016	THU
2/5/2016	Friday	2/1/2016	2/1/2016	February	2/1/2016	2016	FRI
2/6/2016	Saturday	2/6/2016	2/1/2016	February	2/1/2016	2016	SAT

Fields

Search

AW_Calendar_Lookup

Date

Day Name

Month Name

Short Day

Start of Month

Start of Week

Start of Year

Year

AW_Customer_Lookup

AW_Product_Category...

AW_Product_Lookup

DiscountPrice

ModelName

Price Point

ProductColor

ProductCost

ProductDescription

ProductKey

ProductName

ProductPrice

ProductSKU

ProductStyle

ProductSubcategory...

SKUType

AW_Product_Subcateg...

AW>Returns

AW_Sales

AW_Territories_Lookup

1.5 Trong bảng **AW_Product_Lookup**, thêm cột mới “**SKU Category**” để trích xuất hai ký tự đầu tiên từ cột **ProductSKU**

1 SKU Category = LEFT(AW_Product_Lookup[ProductSKU],2)

ProductKey	ProductSubcategory	ProductSKU	ProductName	ModelName	ProductDescription	ProductColor	ProductStyle	ProductCost	ProductPrice	DiscountPrice	SKUType	Price Point	SKU Category
215	1	HL-U509	Sport-100 Helmet, Black	Sport-100	Universal fit, well-ventilated, lightweight, snap-on visor.	Black	NA	\$12.03	\$33.64	\$28.59	HL-U509	Low	HL
216	14	FR-B388-58	LL Road Frame - Black, 58	LL Road Frame	The LL Frame provides a safe comfortable ride, while offer.	Black	U	\$176.20	\$297.61	\$252.89	FR-B388	Mid-Range	FR
256	14	FR-B388-60	LL Road Frame - Black, 60	LL Road Frame	The LL Frame provides a safe comfortable ride, while offer.	Black	U	\$176.20	\$297.61	\$252.89	FR-B388	Mid-Range	FR
259	14	FR-B388-62	LL Road Frame - Black, 62	LL Road Frame	The LL Frame provides a safe comfortable ride, while offer.	Black	U	\$176.20	\$297.61	\$252.89	FR-B388	Mid-Range	FR
279	14	FR-B388-44	LL Road Frame - Black, 44	LL Road Frame	The LL Frame provides a safe comfortable ride, while offer.	Black	U	\$176.20	\$297.61	\$252.89	FR-B388	Mid-Range	FR
282	14	FR-B388-48	LL Road Frame - Black, 48	LL Road Frame	The LL Frame provides a safe comfortable ride, while offer.	Black	U	\$176.20	\$297.61	\$252.89	FR-B388	Mid-Range	FR
285	14	FR-B388-52	LL Road Frame - Black, 52	LL Road Frame	The LL Frame provides a safe comfortable ride, while offer.	Black	U	\$176.20	\$297.61	\$252.89	FR-B388	Mid-Range	FR
296	12	FR-M948-42	HL Mountain Frame - Black, 42	HL Mountain Frame	Each frame is hand-crafted in our Bottell facility to the op.	Black	U	\$617.03	\$1,191.17	\$1,012.40	FR-M948	High	FR
299	12	FR-M948-44	HL Mountain Frame - Black, 44	HL Mountain Frame	Each frame is hand-crafted in our Bottell facility to the op.	Black	U	\$699.09	\$1,349.60	\$1,147.16	FR-M948	High	FR
300	12	FR-M948-48	HL Mountain Frame - Black, 48	HL Mountain Frame	Each frame is hand-crafted in our Bottell facility to the op.	Black	U	\$699.09	\$1,349.60	\$1,147.16	FR-M948	High	FR
302	12	FR-M948-46	HL Mountain Frame - Black, 46	HL Mountain Frame	Each frame is hand-crafted in our Bottell facility to the op.	Black	U	\$617.03	\$1,191.17	\$1,012.40	FR-M948	High	FR
304	12	FR-M948-38	HL Mountain Frame - Black, 38	HL Mountain Frame	Each frame is hand-crafted in our Bottell facility to the op.	Black	U	\$617.03	\$1,191.17	\$1,012.40	FR-M948	High	FR
332	2	BK-R508-58	Road-650 Black, 58	Road-650	Value-priced bike with many features of our top-of-the-lin.	Black	U	\$413.15	\$699.10	\$594.24	BK-R508	High	BK
334	2	BK-R508-60	Road-650 Black, 60	Road-650	Value-priced bike with many features of our top-of-the-lin.	Black	U	\$413.15	\$699.10	\$594.24	BK-R508	High	BK
336	2	BK-R508-62	Road-650 Black, 62	Road-650	Value-priced bike with many features of our top-of-the-lin.	Black	U	\$413.15	\$699.10	\$594.24	BK-R508	High	BK
338	2	BK-R508-44	Road-650 Black, 44	Road-650	Value-priced bike with many features of our top-of-the-lin.	Black	U	\$413.15	\$699.10	\$594.24	BK-R508	High	BK
340	2	BK-R508-48	Road-650 Black, 48	Road-650	Value-priced bike with many features of our top-of-the-lin.	Black	U	\$413.15	\$699.10	\$594.24	BK-R508	High	BK
342	2	BK-R508-52	Road-650 Black, 52	Road-650	Value-priced bike with many features of our top-of-the-lin.	Black	U	\$413.15	\$699.10	\$594.24	BK-R508	High	BK
348	1	BK-M828-38	Mountain-100 Black, 38	Mountain-100	Top-of-the-line competition mountain bike. Performance=	Black	U	\$1,898.09	\$3,174.99	\$2,868.74	BK-M828	High	BK
349	1	BK-M828-42	Mountain-100 Black, 42	Mountain-100	Top-of-the-line competition mountain bike. Performance=	Black	U	\$1,898.09	\$3,174.99	\$2,868.74	BK-M828	High	BK
350	1	BK-M828-44	Mountain-100 Black, 44	Mountain-100	Top-of-the-line competition mountain bike. Performance=	Black	U	\$1,898.09	\$3,174.99	\$2,868.74	BK-M828	High	BK
351	1	BK-M828-48	Mountain-100 Black, 48	Mountain-100	Top-of-the-line competition mountain bike. Performance=	Black	U	\$1,898.09	\$3,174.99	\$2,868.74	BK-M828	High	BK
358	1	BK-M688-38	Mountain-200 Black, 38	Mountain-200	Serious back-country riding. Perfect for all levels of compe	Black	U	\$1,105.81	\$2,049.10	\$1,742.74	BK-M688	High	BK
360	1	BK-M688-42	Mountain-200 Black, 42	Mountain-200	Serious back-country riding. Perfect for all levels of compe	Black	U	\$1,105.81	\$2,049.10	\$1,742.74	BK-M688	High	BK
362	1	BK-M688-46	Mountain-200 Black, 46	Mountain-200	Serious back-country riding. Perfect for all levels of compe	Black	U	\$1,105.81	\$2,049.10	\$1,742.74	BK-M688	High	BK
364	1	BK-M478-38	Mountain-300 Black, 38	Mountain-300	For true trail addicts. An extremely durable bike that will i	Black	U	\$598.44	\$1,079.99	\$917.99	BK-M478	High	BK
365	1	BK-M478-40	Mountain-300 Black, 40	Mountain-300	For true trail addicts. An extremely durable bike that will i	Black	U	\$598.44	\$1,079.99	\$917.99	BK-M478	High	BK
366	1	BK-M478-44	Mountain-300 Black, 44	Mountain-300	For true trail addicts. An extremely durable bike that will i	Black	U	\$598.44	\$1,079.99	\$917.99	BK-M478	High	BK
367	1	BK-M478-48	Mountain-300 Black, 48	Mountain-300	For true trail addicts. An extremely durable bike that will i	Black	U	\$598.44	\$1,079.99	\$917.99	BK-M478	High	BK
373	2	BK-R898-44	Road-250 Black, 44	Road-250	Aluminum-alloy frame provides a light, stiff ride, whether	Black	U	\$1,320.68	\$2,181.56	\$1,854.33	BK-R898	High	BK
375	2	BK-R898-48	Road-250 Black, 48	Road-250	Aluminum-alloy frame provides a light, stiff ride, whether	Black	U	\$1,320.68	\$2,181.56	\$1,854.33	BK-R898	High	BK
377	2	BK-R898-52	Road-250 Black, 52	Road-250	Aluminum-alloy frame provides a light, stiff ride, whether	Black	U	\$1,320.68	\$2,181.56	\$1,854.33	BK-R898	High	BK
379	2	BK-R898-58	Road-250 Black, 58	Road-250	Aluminum-alloy frame provides a light, stiff ride, whether	Black	U	\$1,320.68	\$2,181.56	\$1,854.33	BK-R898	High	BK
409	12	FR-M388-38	ML Mountain Frame - Black, 38	ML Mountain Frame-W	The ML frame is a heat-treated aluminum frame made wit	Black	NA	\$1,885.82	\$3,488.76	\$2,961.45	FR-M388	Mid-Range	FR
420	17	FW-M423	LL Mountain Front Wheel	LL Mountain Front Wheel	Replacement mountain wheel for entry-level rider.	Black	NA	\$26.97	\$60.74	\$51.63	FW-M423	Low	FW
421	17	FW-M762	ML Mountain Front Wheel	ML Mountain Front Wheel	Replacement mountain wheel for the casual to serious rid	Black	NA	\$92.81	\$209.02	\$177.67	FW-M762	Mid-Range	FW
471	17	BK-M3078	ML Mountain Front Wheel	ML Mountain Front Wheel	Replacement mountain wheel for the casual to serious rid	Black	NA	\$193.01	\$309.71	\$260.12	BK-M3078	Mid-Range	BK

Fields

Search

AW_Calendar_Lookup

Date

Day Name

Month Name

Short Day

Start of Month

Start of Week

Start of Year

Year

AW_Customer_Lookup

AW_Product_Category...

AW_Product_Lookup

DiscountPrice

ModelName

Price Point

ProductColor

ProductCost

ProductDescription

ProductKey

ProductName

ProductPrice

ProductSKU

ProductStyle

ProductSubcategory...

SKUType

AW_Product_Subcateg...

AW>Returns

AW_Sales

AW_Territories_Lookup

1.6 Sửa đổi cột “**SKU Category**” vừa tạo để trích xuất các ký tự từ đầu chuỗi cho đến ký tự “-” đầu tiên

1. SKU Category = LEFT(AW_Product_Lookup[ProductSKU], SEARCH("FR", AW_Product_Lookup[ProductSKU]) - 1)														Fields	
ProductKey	ProductSubcategoryKey	ProductSKU	ProductName	ProductDescription	ProductColor	ProductStyle	ProductCost	ProductPrice	DiscountPrice	SKUType	Price Point	SKU Category			
215	31	HL-U509	Sport-100 Helmet, Black	Sport-100	Universal fit, well-ventilated, lightweight, snap-on visor.	Black	NA	\$12.03	\$33.64	\$28.59	FR-U509	Low	HL		
253	14	FR-R388-58	LL Road Frame - Black, 58	LL Road Frame	The LL Frame provides a safe comfortable ride, while offer	Black	U	\$176.20	\$297.63	\$252.99	FR-R388	Mid-Range	FR		
256	14	FR-R388-60	LL Road Frame - Black, 60	LL Road Frame	The LL Frame provides a safe comfortable ride, while offer	Black	U	\$176.20	\$297.63	\$252.99	FR-R388	Mid-Range	FR		
259	14	FR-R388-62	LL Road Frame - Black, 62	LL Road Frame	The LL Frame provides a safe comfortable ride, while offer	Black	U	\$176.20	\$297.63	\$252.99	FR-R388	Mid-Range	FR		
279	14	FR-R388-44	LL Road Frame - Black, 44	LL Road Frame	The LL Frame provides a safe comfortable ride, while offer	Black	U	\$176.20	\$297.63	\$252.99	FR-R388	Mid-Range	FR		
282	14	FR-R388-48	LL Road Frame - Black, 48	LL Road Frame	The LL Frame provides a safe comfortable ride, while offer	Black	U	\$176.20	\$297.63	\$252.99	FR-R388	Mid-Range	FR		
285	14	FR-R388-52	LL Road Frame - Black, 52	LL Road Frame	The LL Frame provides a safe comfortable ride, while offer	Black	U	\$176.20	\$297.63	\$252.99	FR-R388	Mid-Range	FR		
286	12	FR-M948-42	HL Mountain Frame - Black, 42	HL Mountain Frame	Each frame is hand-crafted in our Bethel facility to the op	Black	U	\$617.03	\$1,191.17	\$1,012.49	FR-M948	High	FR		
299	12	FR-M948-44	HL Mountain Frame - Black, 44	HL Mountain Frame	Each frame is hand-crafted in our Bethel facility to the op	Black	U	\$699.09	\$1,349.60	\$1,147.16	FR-M948	High	FR		
300	12	FR-M948-48	HL Mountain Frame - Black, 48	HL Mountain Frame	Each frame is hand-crafted in our Bethel facility to the op	Black	U	\$699.09	\$1,349.60	\$1,147.16	FR-M948	High	FR		
302	12	FR-M948-46	HL Mountain Frame - Black, 46	HL Mountain Frame	Each frame is hand-crafted in our Bethel facility to the op	Black	U	\$617.03	\$1,191.17	\$1,012.49	FR-M948	High	FR		
304	12	FR-M948-58	HL Mountain Frame - Black, 58	HL Mountain Frame	Each frame is hand-crafted in our Bethel facility to the op	Black	U	\$617.03	\$1,191.17	\$1,012.49	FR-M948	High	FR		
332	2	BK-R508-58	Road-650 Black, 58	Road-650	Value-priced bike with many features of our top-of-the-in	Black	U	\$413.13	\$699.10	\$594.24	BK-R508	High	BK		
334	2	BK-R508-60	Road-650 Black, 60	Road-650	Value-priced bike with many features of our top-of-the-in	Black	U	\$413.13	\$699.10	\$594.24	BK-R508	High	BK		
336	2	BK-R508-62	Road-650 Black, 62	Road-650	Value-priced bike with many features of our top-of-the-in	Black	U	\$413.13	\$699.10	\$594.24	BK-R508	High	BK		
338	2	BK-R508-44	Road-650 Black, 44	Road-650	Value-priced bike with many features of our top-of-the-in	Black	U	\$413.13	\$699.10	\$594.24	BK-R508	High	BK		
340	2	BK-R508-48	Road-650 Black, 48	Road-650	Value-priced bike with many features of our top-of-the-in	Black	U	\$413.13	\$699.10	\$594.24	BK-R508	High	BK		
342	2	BK-R508-52	Road-650 Black, 52	Road-650	Value-priced bike with many features of our top-of-the-in	Black	U	\$413.13	\$699.10	\$594.24	BK-R508	High	BK		
346	2	BK-M828-58	Mountain-100 Black, 58	Mountain-100	Top-of-the-line competition mountain bike. Performance-i	Black	U	\$1,898.09	\$3,174.99	\$2,868.74	BK-M828	High	BK		
349	2	BK-M828-42	Mountain-100 Black, 42	Mountain-100	Top-of-the-line competition mountain bike. Performance-i	Black	U	\$1,898.09	\$3,174.99	\$2,868.74	BK-M828	High	BK		
350	2	BK-M828-44	Mountain-100 Black, 44	Mountain-100	Top-of-the-line competition mountain bike. Performance-i	Black	U	\$1,898.09	\$3,174.99	\$2,868.74	BK-M828	High	BK		
351	2	BK-M828-48	Mountain-100 Black, 48	Mountain-100	Top-of-the-line competition mountain bike. Performance-i	Black	U	\$1,898.09	\$3,174.99	\$2,868.74	BK-M828	High	BK		
358	2	BK-M688-38	Mountain-200 Black, 38	Mountain-200	Serious back-country riding. Perfect for all levels of compe	Black	U	\$1,105.81	\$2,049.10	\$1,741.74	BK-M688	High	BK		
360	2	BK-M688-42	Mountain-200 Black, 42	Mountain-200	Serious back-country riding. Perfect for all levels of compe	Black	U	\$1,105.81	\$2,049.10	\$1,741.74	BK-M688	High	BK		
362	2	BK-M688-46	Mountain-200 Black, 46	Mountain-200	Serious back-country riding. Perfect for all levels of compe	Black	U	\$1,105.81	\$2,049.10	\$1,741.74	BK-M688	High	BK		
364	2	BK-M478-58	Mountain-300 Black, 58	Mountain-300	For true trail addicts. An extremely durable bike that will	Black	U	\$598.44	\$1,079.99	\$917.99	BK-M478	High	BK		
365	2	BK-M478-40	Mountain-300 Black, 40	Mountain-300	For true trail addicts. An extremely durable bike that will	Black	U	\$598.44	\$1,079.99	\$917.99	BK-M478	High	BK		
366	2	BK-M478-44	Mountain-300 Black, 44	Mountain-300	For true trail addicts. An extremely durable bike that will	Black	U	\$598.44	\$1,079.99	\$917.99	BK-M478	High	BK		
367	2	BK-M478-48	Mountain-300 Black, 48	Mountain-300	For true trail addicts. An extremely durable bike that will	Black	U	\$598.44	\$1,079.99	\$917.99	BK-M478	High	BK		
373	2	BK-R898-44	Road-250 Black, 44	Road-250	Aluminum-alloy frame provides a light, stiff ride, whether	Black	U	\$1,320.68	\$2,181.56	\$1,854.33	BK-R898	High	BK		
375	2	BK-R898-48	Road-250 Black, 48	Road-250	Aluminum-alloy frame provides a light, stiff ride, whether	Black	U	\$1,320.68	\$2,181.56	\$1,854.33	BK-R898	High	BK		
377	2	BK-R898-52	Road-250 Black, 52	Road-250	Aluminum-alloy frame provides a light, stiff ride, whether	Black	U	\$1,320.68	\$2,181.56	\$1,854.33	BK-R898	High	BK		
379	2	BK-R898-58	Road-250 Black, 58	Road-250	Aluminum-alloy frame provides a light, stiff ride, whether	Black	U	\$1,320.68	\$2,181.56	\$1,854.33	BK-R898	High	BK		
409	12	FR-M6038-38	ML Mountain Frame-W	ML Mountain Frame-W	The ML frame is a wrap-around aluminum frame made wit	Black	U	\$165.81	\$148.76	\$136.45	FR-M6038	Mid-Range	FR		
410	17	FW-M6471	11 Mountain Front Wheel	11 Mountain Front Wheel	Double-vented mountain wheel for extra-light rider	Black	NA	636.47	660.74	651.63	FW-M6471	Low	FW		

2. Trong REPORT view, tạo các measures (Sử dụng Matrix visual để kiểm tra kết quả với các đáp án được cung cấp sẵn)

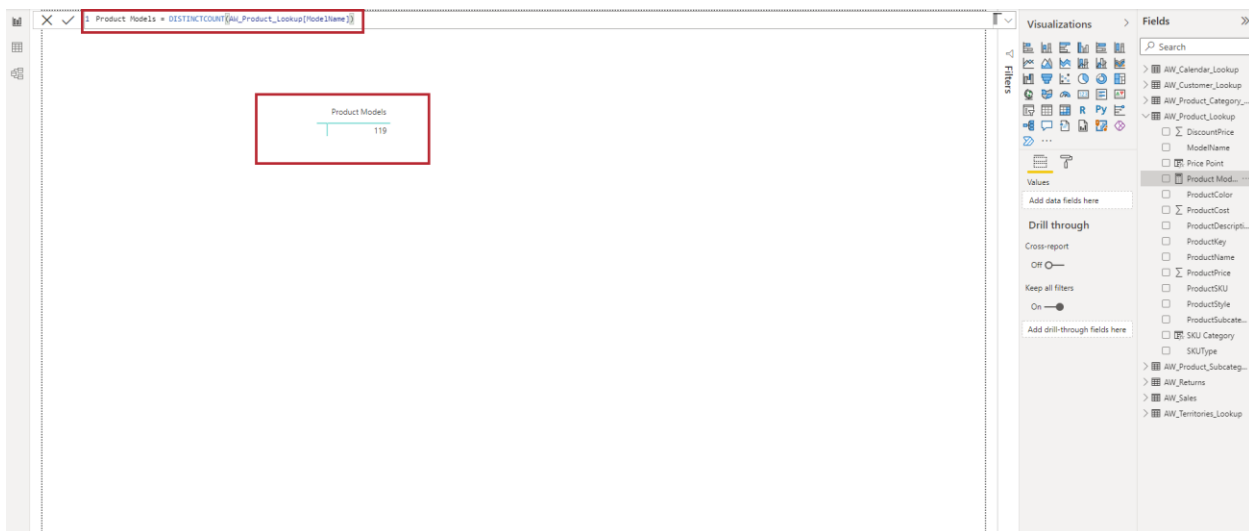
Để tạo mới một Measures, các bạn sẽ chuyển sang **REPORT** view, sau đó chọn vào bảng muốn thêm Measures, nhấn chuột phải vào bảng và chọn New Measures:

The screenshot shows the Power BI Desktop interface in REPORT view. The main canvas displays a table with the following data:

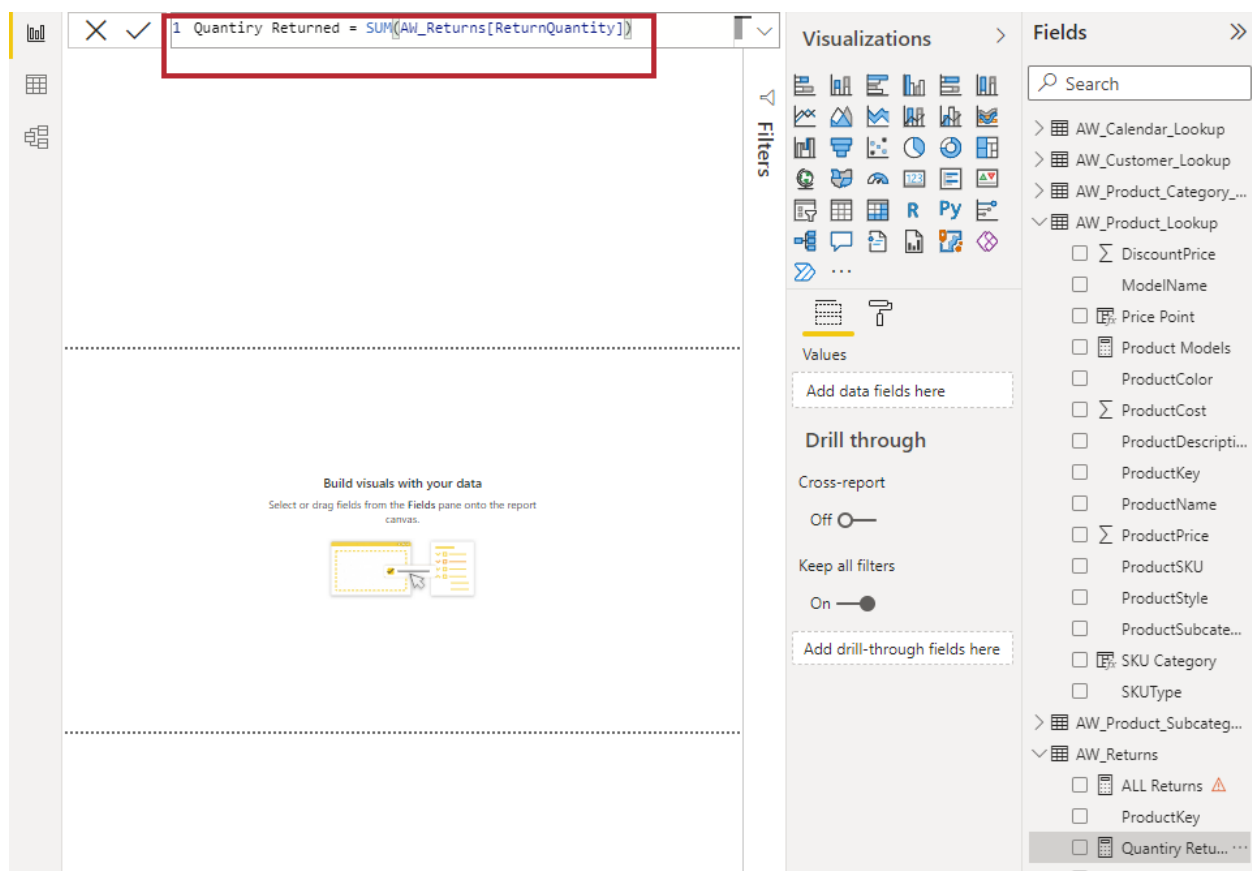
ProductKey	ReturnQuantity	OrderQuantity
214	70	2099
215	52	1940
220	66	1995
223	46	4151
226	12	392
229	15	408
232	15	424
235	10	381
310	4	169
311	7	139
312	8	179
313	5	168
314	5	157
Total	1828	84174

On the right side, the 'Visualizations' pane shows the 'New measure' button highlighted with a red box. The 'Fields' pane on the far right lists the available data sources and columns.

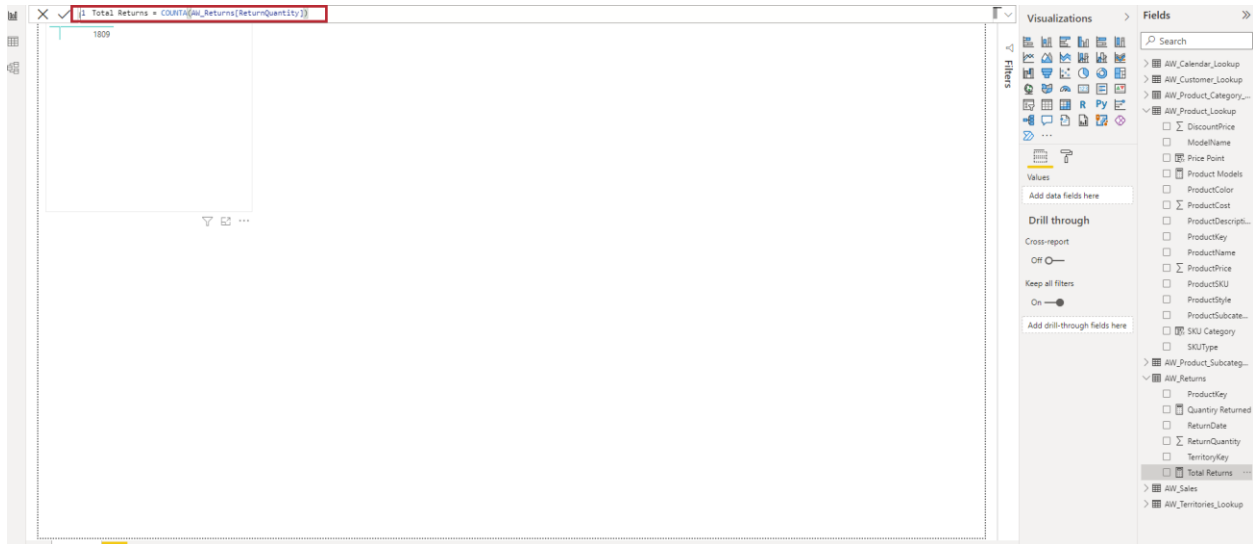
2.1 Tạo measures “Product Models” trong bảng AW_Product_Lookup để đếm số ModelName duy nhất (Đáp án là 119)



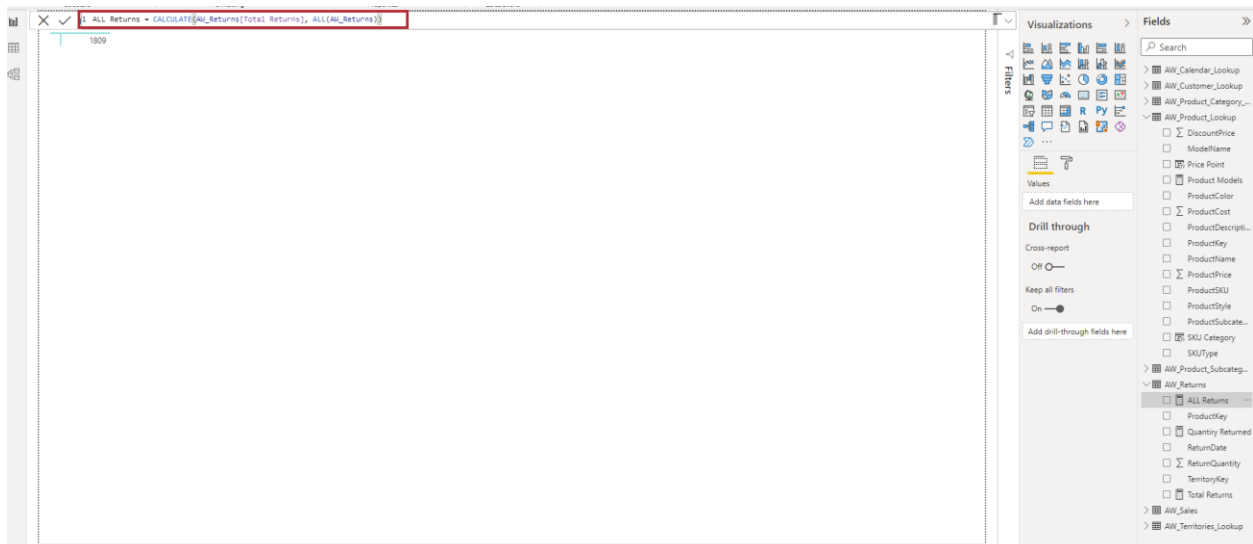
2.2 Tạo Measures “Quantiry Returned” để tính tổng số **ReturnQuantity** trong bảng **AW_Returns** (Đáp án: 1828)



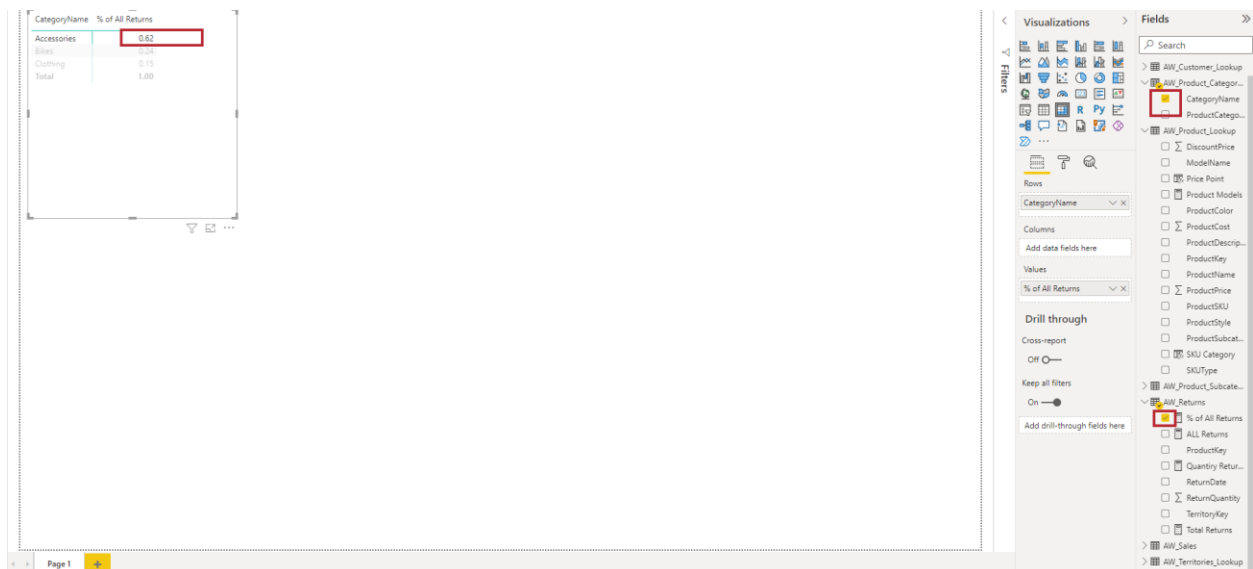
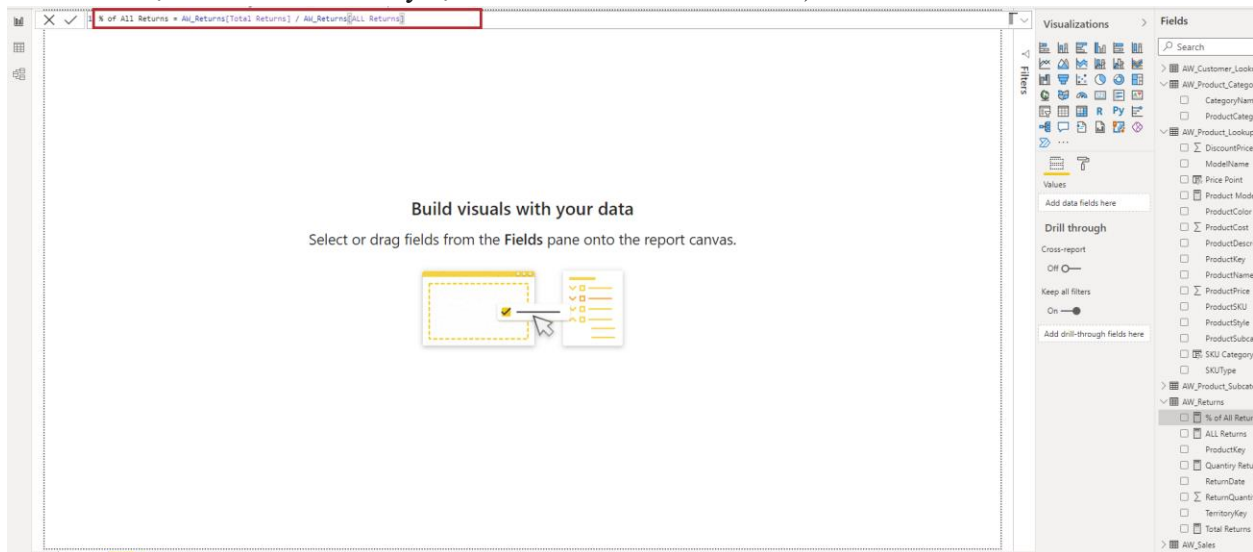
2.3 Tạo Measures “Total Returns” để đếm số dòng không trống của cột ReturnQuantity trong bảng trong bảng AW_Returns (Đáp án: 1809)



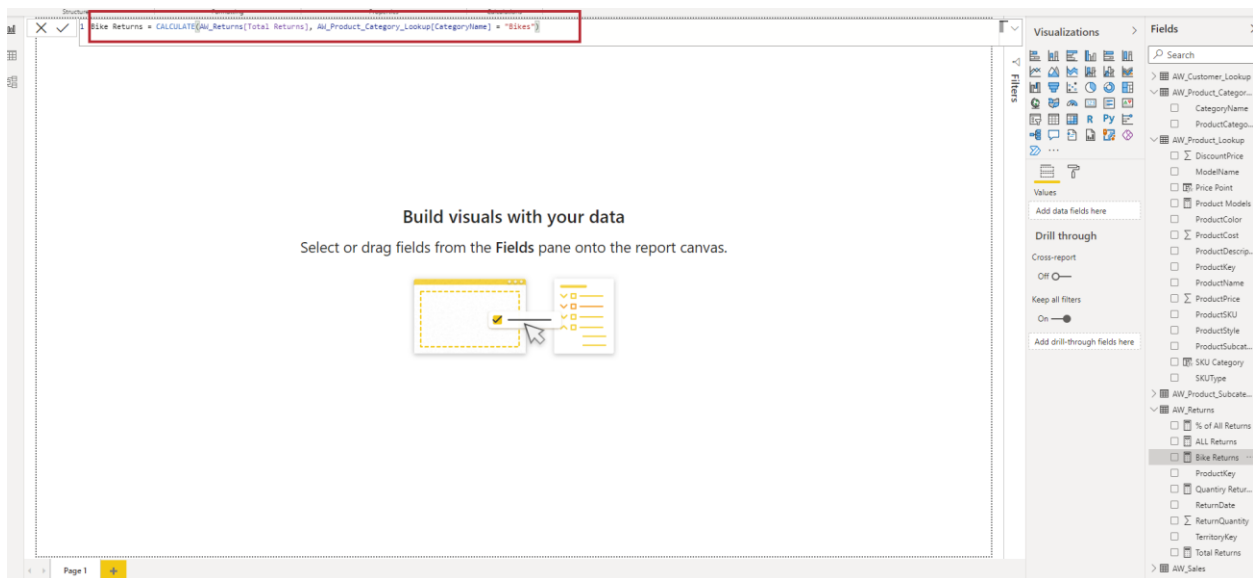
2.4 Tạo Measures “ALL Returns” để tính tổng số hàng được trả lại (Đáp án 1809)



2.5 Tạo Measures “% of All Returns” bằng cách lấy **Total Return / ALL Return**. “% of All Returns” có thể được sử dụng để phân tích tỷ lệ hoàn vốn hoặc lợi nhuận (Có thể kiểm tra khi với danh mục **Accessories** thì tỷ lệ “% of All Returns” là 62%)

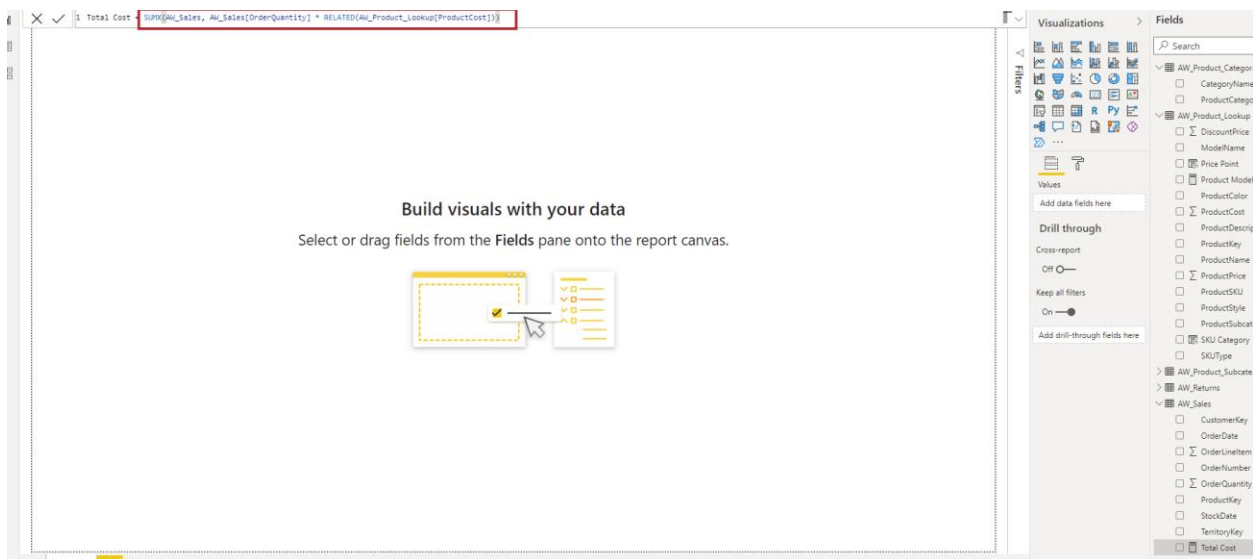


2.6 Tạo Measures “**Bike Returns**” để tính tổng số hàng trả lại đối với mặt hàng xe đạp (Đáp án: 427)



Hàm **CALCULATE** thường được dùng để lọc giá trị theo điều kiện được truyền vào.

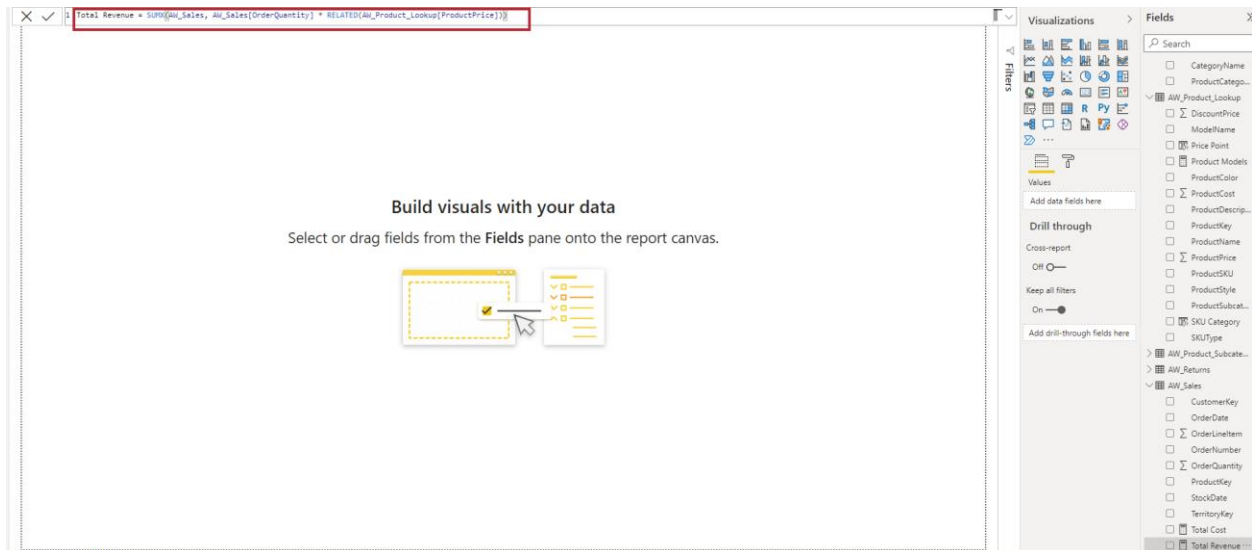
2.7 Tạo Measures “Total Cost” trong bảng **AW_Sales** bằng cách nhân **OrderQuantity** với **ProductCost** ở cấp hàng (Đáp án: Tổng chi phí sẽ là **14,456,986.32**)



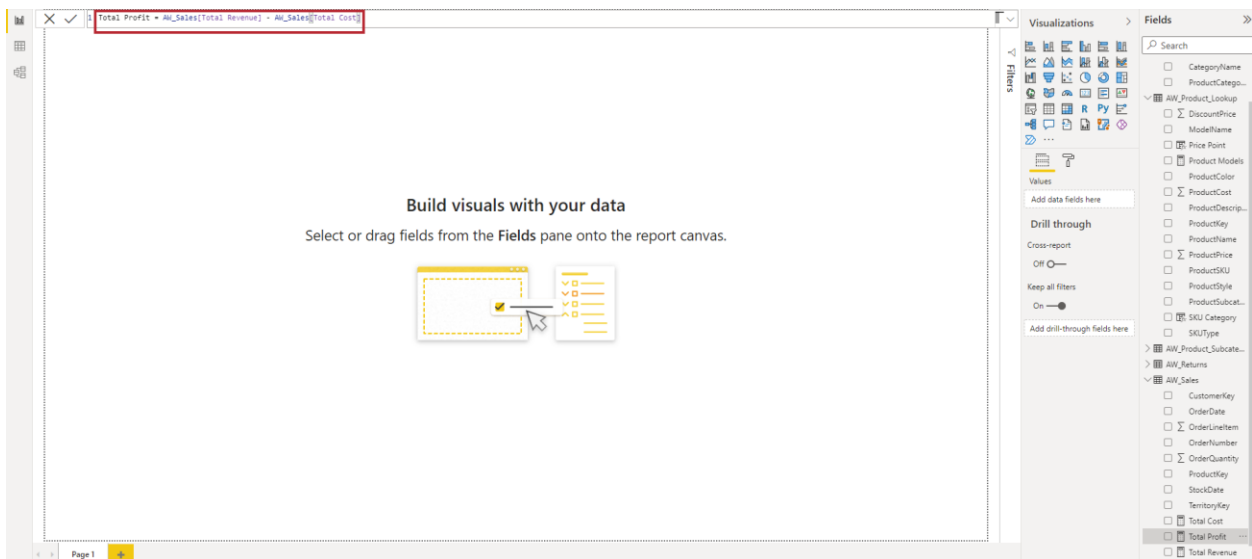
Hàm **SUMX** trả về giá trị tổng các số trong một biểu thức tính, và thường được dùng để tính tổng theo một số điều kiện trong cột (không phải tính tổng toàn bộ cột). Khác biệt giữa hàm SUM và hàm SUMX là hàm SUM trả về tổng các các số trong cùng một cột còn hàm SUMX sẽ dựa theo điều kiện được truyền vào của cột để tính tổng, đây còn gọi là tính tổng theo cấp hàng.

Hàm **RELATED** giúp trả về giá trị tương ứng từ một bảng khác, lưu ý để thực hiện được thì hai bảng phải được thiết lập một mối quan hệ.

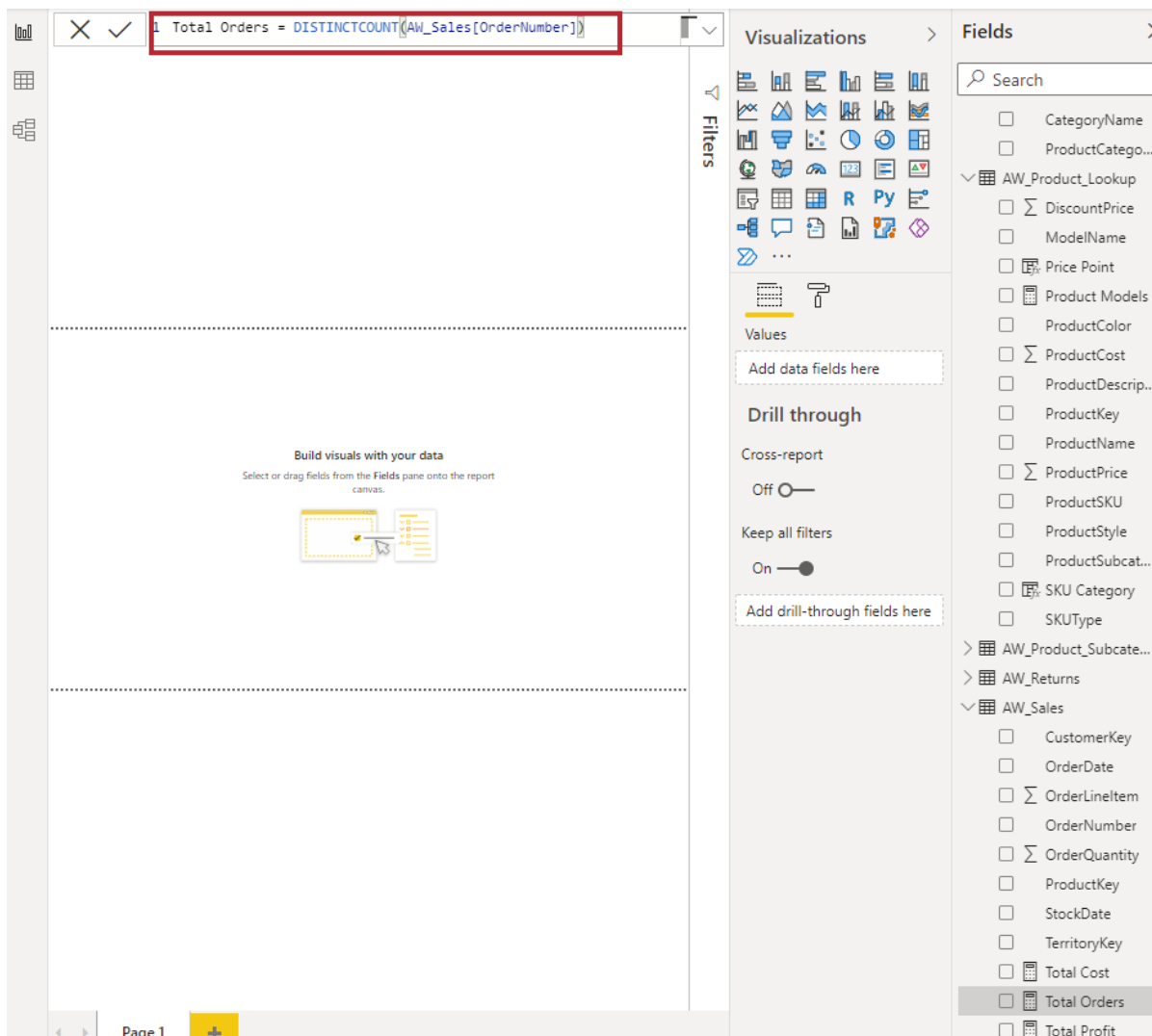
2.8 Tạo Measures “**Total Revenue**” trong bảng **AW_Sales** bằng cách nhân **OrderQuantity** với **ProductPrice** ở cấp hàng (Đáp án: Total Revenue (tổng doanh thu) sẽ là **24,914,567.18**)



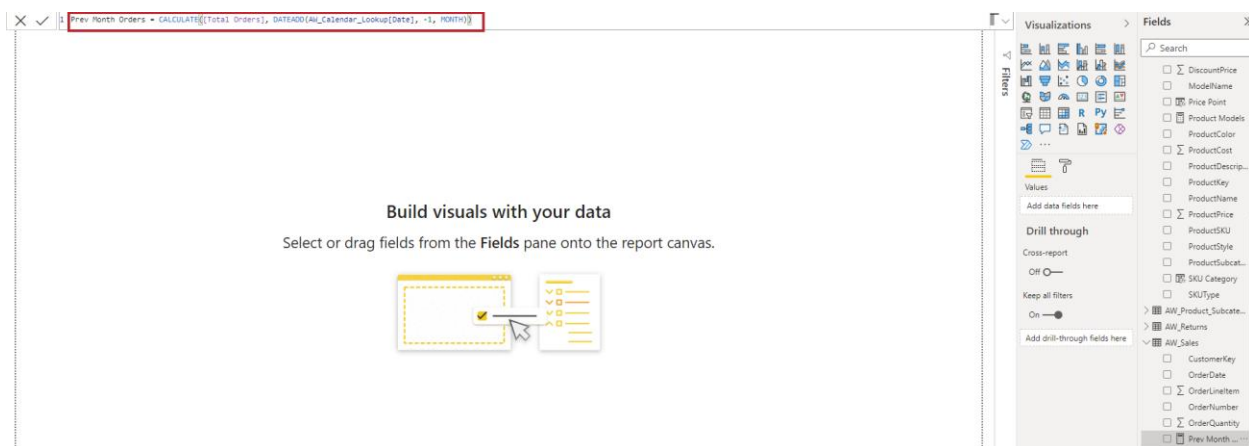
2.9 Khi các bạn đã tính được **Total Cost** và **Total Revenue**, hãy tạo một Measures “**Total Profit**” được định nghĩa là **Total Revenue** (tổng doanh thu) trừ đi **Total Cost** (tổng chi phí) (Đáp án: Total Profit sẽ là **10,457,580.86**)



2.10 Tạo Measures “**Total Orders**” trong bảng **AW_Sales**, để tính tổng số đơn đặt hàng không trùng nhau theo **OrderNumber** (Đáp án: **25164**)



2.11 Tạo Measures “Prev Month Orders” trong bảng **AW_Sales**, để tính tổng số đơn đặt hàng cho tháng trước (Tạo Matrix visual với "Start of Month" thuộc về rows để kiểm tra measures đã tạo thành công)



Hàm **DATEADD** giúp trả về một cột chứa các giá trị về thời gian (ngày, tháng, quý, năm) được chỉ định dựa theo mốc thời gian có sẵn.

Kiểm tra kết quả:

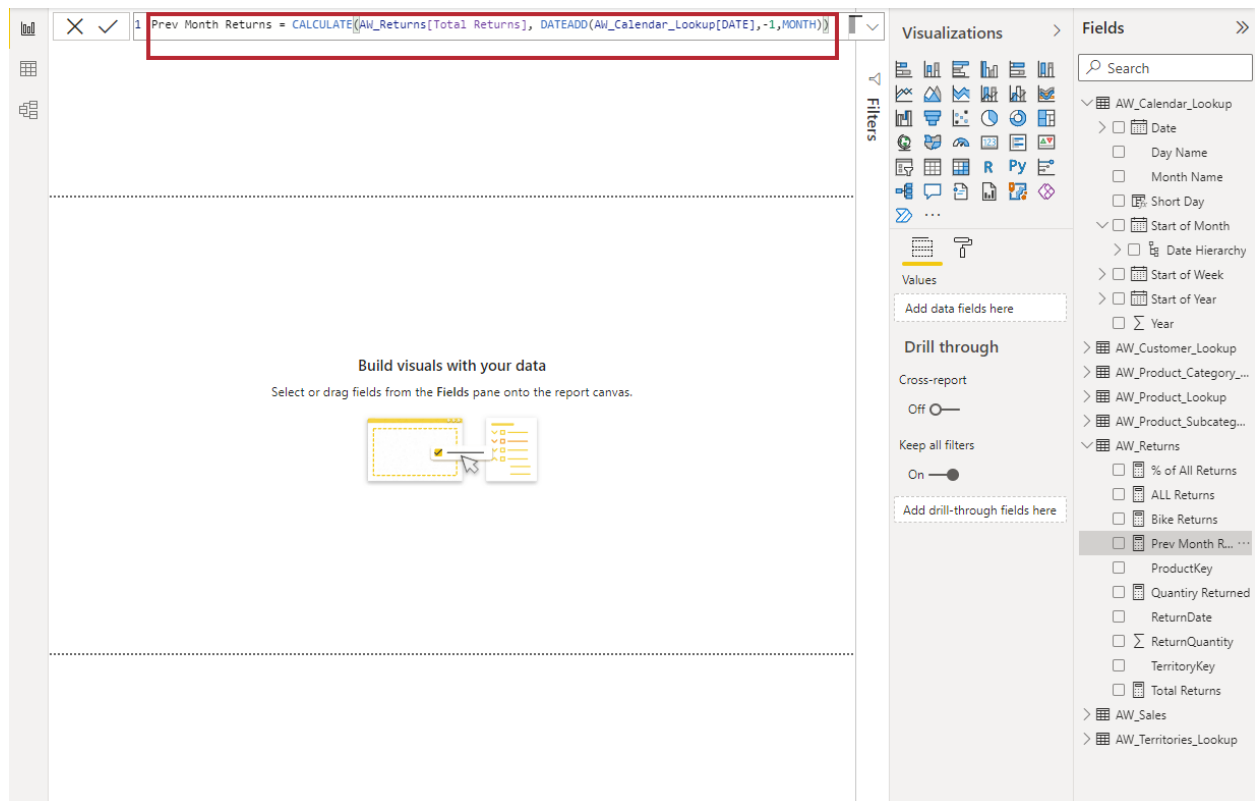
Start of Month	Total Orders	Prev Month Orders
1/1/2015	184	
2/1/2015	165	184
3/1/2015	198	165
4/1/2015	204	198
5/1/2015	206	204
6/1/2015	212	206
7/1/2015	247	212
8/1/2015	278	247
9/1/2015	196	278
10/1/2015	223	196
11/1/2015	191	223
12/1/2015	326	191
1/1/2016	242	326
2/1/2016	277	242
Total	25164	23018

The screenshot shows the Power BI Desktop interface. On the left, a table visual displays the results of a DAX query. The table has three columns: 'Start of Month', 'Total Orders', and 'Prev Month Orders'. The data shows monthly totals from January 2015 to February 2016, with a total of 25,164 orders and 23,018 previous month orders. On the right, the 'Fields' pane shows the 'AW_Calendar_Lookup' table selected. The 'Start of Month' field is highlighted in the 'Rows' section, and the 'Total Orders' and 'Prev Month Orders' fields are highlighted in the 'Columns' section. The 'Visualizations' pane on the left shows a table visual.

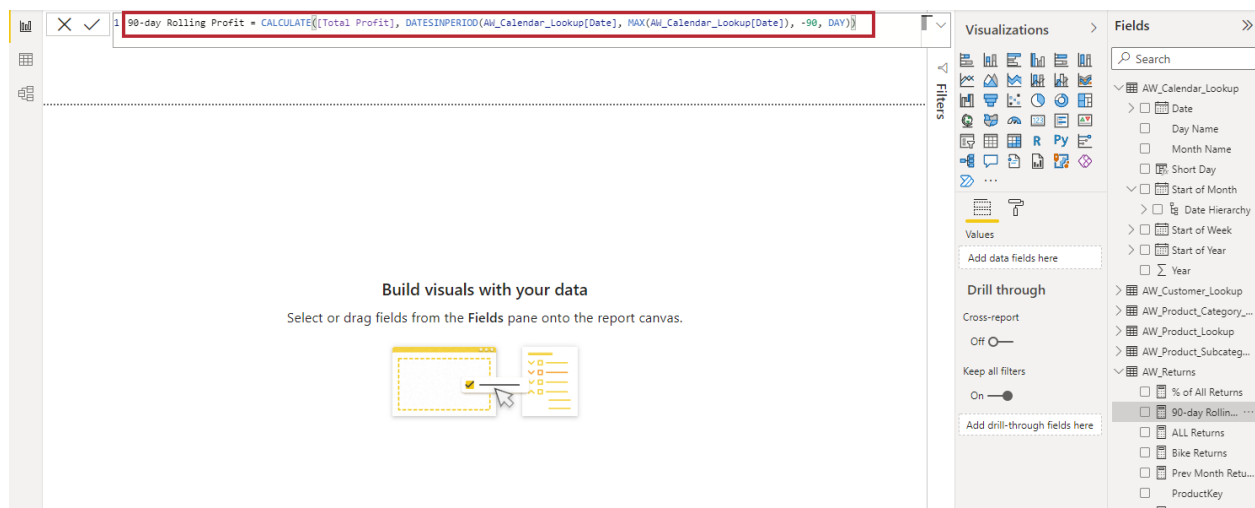
2.12 Tạo Measures “**Order Target**” trong bảng **AW_Sales** được tính bằng mức tăng 10% của **Prev Month Orders** (Tạo Matrix visual với " Start of Month " thuộc về rows để kiểm tra measures đã tạo thành công)

The screenshot displays the Microsoft Power BI interface. At the top, the formula bar shows the measure definition: `Order Target = AW_Sales[Prev Month Orders] * 1.1`. Below the formula bar is the main report canvas, which currently contains a placeholder message: "Build visuals with your data. Select or drag fields from the Fields pane onto the report canvas." To the right of the canvas are three panes: "Visualizations", "Filters", and "Fields". The "Fields" pane is expanded, showing a list of tables and their columns. The table **AW_Sales** is selected, and the column **Order Target** is highlighted. The "Visualizations" pane shows various chart types, and the "Filters" pane is currently empty.

2.13 Tạo Measures “**Prev Month Returns**” trong bảng **AW_Returns** để tính tổng số hàng trả lại tháng trước (Tạo Matrix visual với " Start of Month " thuộc về để kiểm tra measures đã tạo thành công)



2.14 Tạo Measures “90-day Rolling Profit” trong bảng **AW_Sales** để tính lợi nhuận cộng dồn trong 90 ngày (Đáp án: **2,142,623.27**)



Hàm **DATESINPERIOD** giúp trả về những giá trị thời gian nằm trong một khoảng tính từ Ngày bắt đầu tới Ngày cách ngày bắt đầu một khoảng nhất định.

3. Lưu lại file thực hành với định dạng .pbix