Power BI Questions (Advanced Financial Reporting)

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2021-04-19

POWER BI QUESTIONS (ADVANCED FINANCIAL REPORTING)

Question 1

Ultra-Low Cost Ltd. (ULC) is a public company located in Vancouver and prepares its financial statements in accordance with IFRS. Its year end is December 31. With the cost of living increasing in Vancouver, it has found success supplying low cost stores with merchandise sourced from other countries.

ULC was founded five years ago by Jan and Colton, a couple who noticed their monthly budget was increasing steadily even though they were not purchasing anything out of the ordinary. Jan had an idea that if quality everyday purchases could be sourced from elsewhere and provided to low cost stores in Vancouver, it would present an affordable way for other Vancouverites to continue to afford to live in the city.

ULC has never formally tracked its foreign purchases before. However, over the last three years ULC has sourced much more goods from foreign countries and would like to understand where the purchases are coming from so that a hedging strategy can be adopted.

To reduce shipping costs and earn discounts for bulk buys, ULC only purchases foreign goods once a year in each country that it deals with. It placed all orders on December 15, 20X8 and took delivery of all inventory on January 15, 20X9.

Use Power BI to provide an analysis of the transactions so Jan and Colton can understand their foreign currency transactions.

Required:

a) Prepare the following:

i. Create a card visualization of how many countries ULC does business with.
ii. Create a card visualization of how many different currencies ULC conducts business in.
iii. Create a map visualization of the supplier locations.
iv. Create a pie chart showing how much of cost of goods sold (in Canadian dollars) is spent in each currency.
v. Create a table showing the foreign exchange rates in effect on the day the order was placed (the spot rate) and the day the order was paid for (the settlement rate).

Hint: Your visualization must be selected before you can work on it. To select your visualization, simply click on it in Power BI.

Power BI Instructions for Question 1

For each of the visualizations required, paste a picture of your final visualization into your assignment submission file.

NOTES:

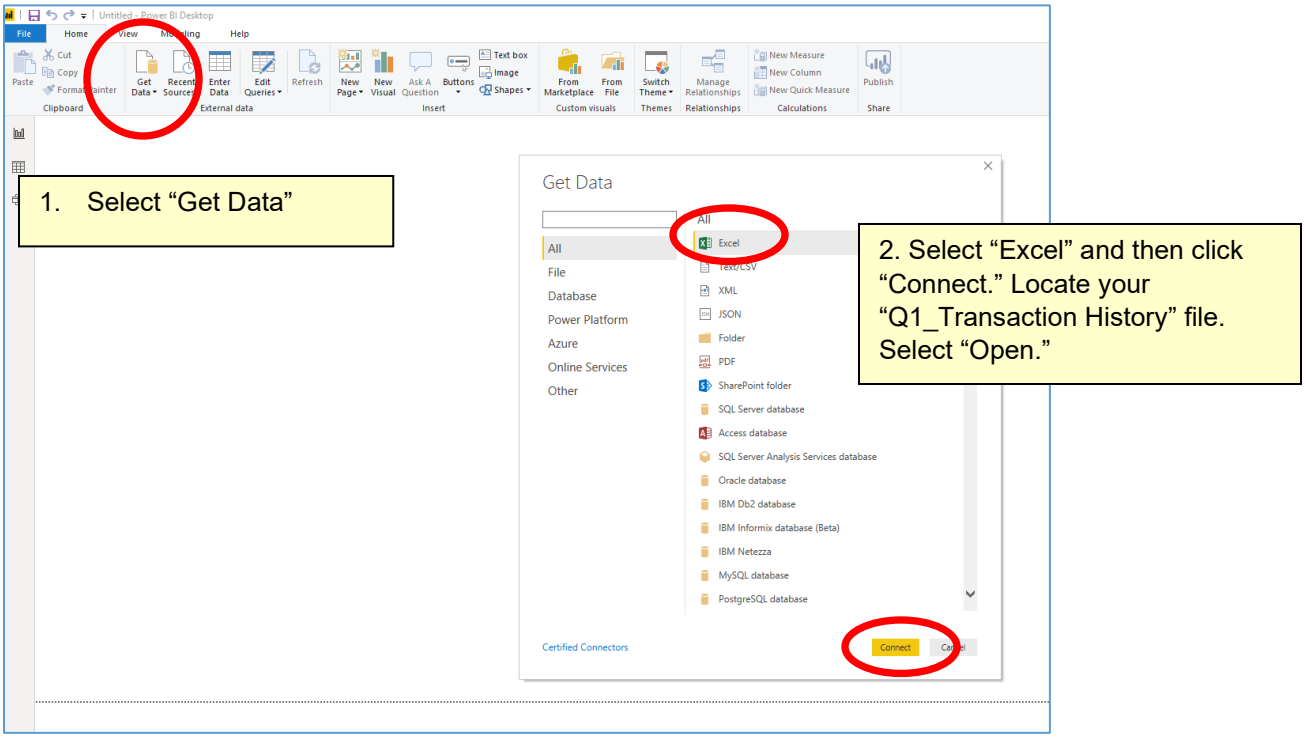
ULC tracks the following information about its vendors and purchases:

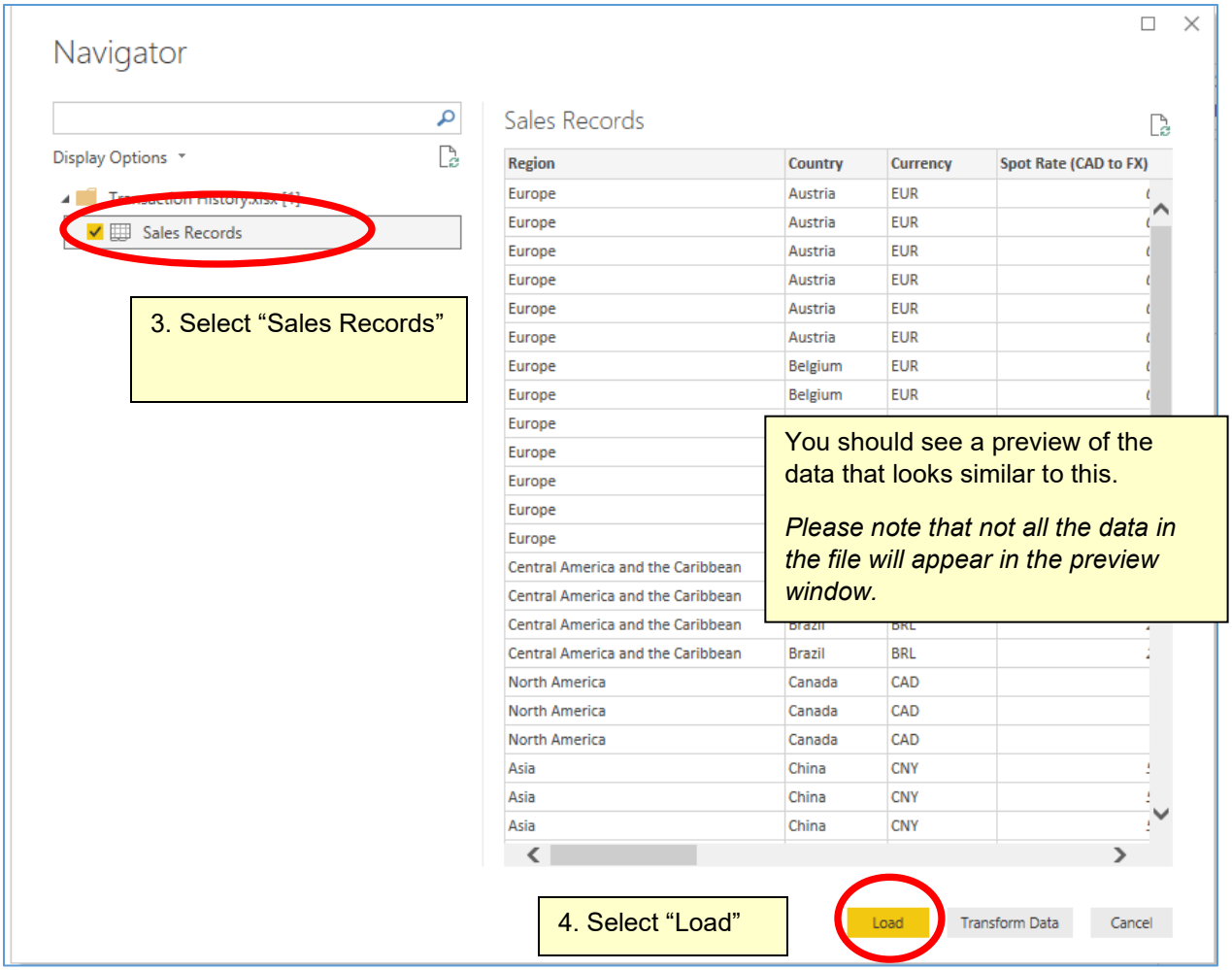
- *Region:* Global geographic region (defaults to North America)
- *Country:* Country of product origin.
- *Currency:* Currency used in the Country
- *Spot Rate:* The foreign exchange rate in place on the day the order was placed
- *Settlement Rate:* The foreign exchange rate in place on the day the order was paid for.
- *Order Date:* Date the order was purchased
- *Order ID:* Unique Identifier for each item purchased
- *Settlement Date:* Date the order was paid for
- *Units Purchased:* Number of units purchased per Order ID.
- *Unit Cost:* The unit cost of each item (reported in Canadian dollars).
- *Total Cost:* Total cost of the order (Units Purchased x Unit Cost).

Appendix I

Step 1:

Open Power BI and import your data.

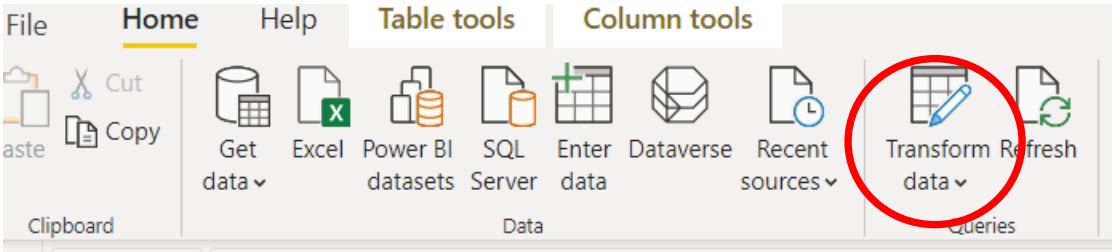


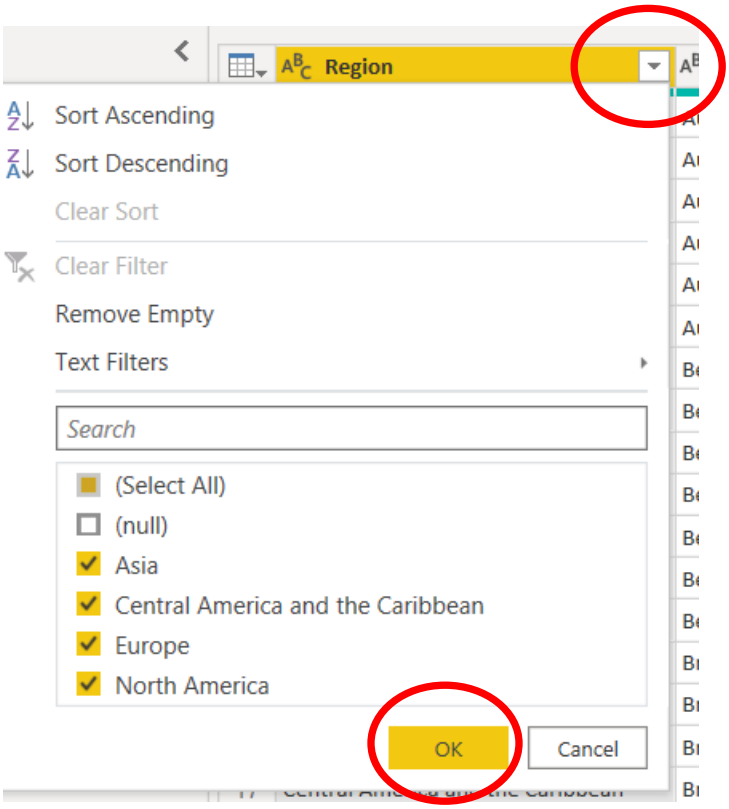


Before you can work with the data, make sure there are no blank rows in the table.

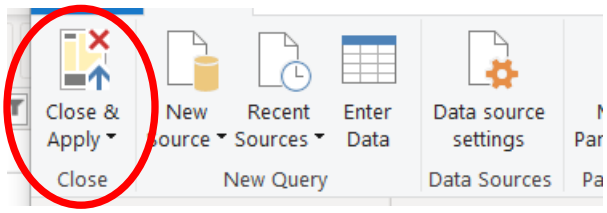
1. Select the Data view on the left side of your screen.

2. From the Home tab, Select “Transform data”.





3. Select the arrow beside Region and look for (null). Deselect the box beside (null) if it appears as a choice. Then click OK.

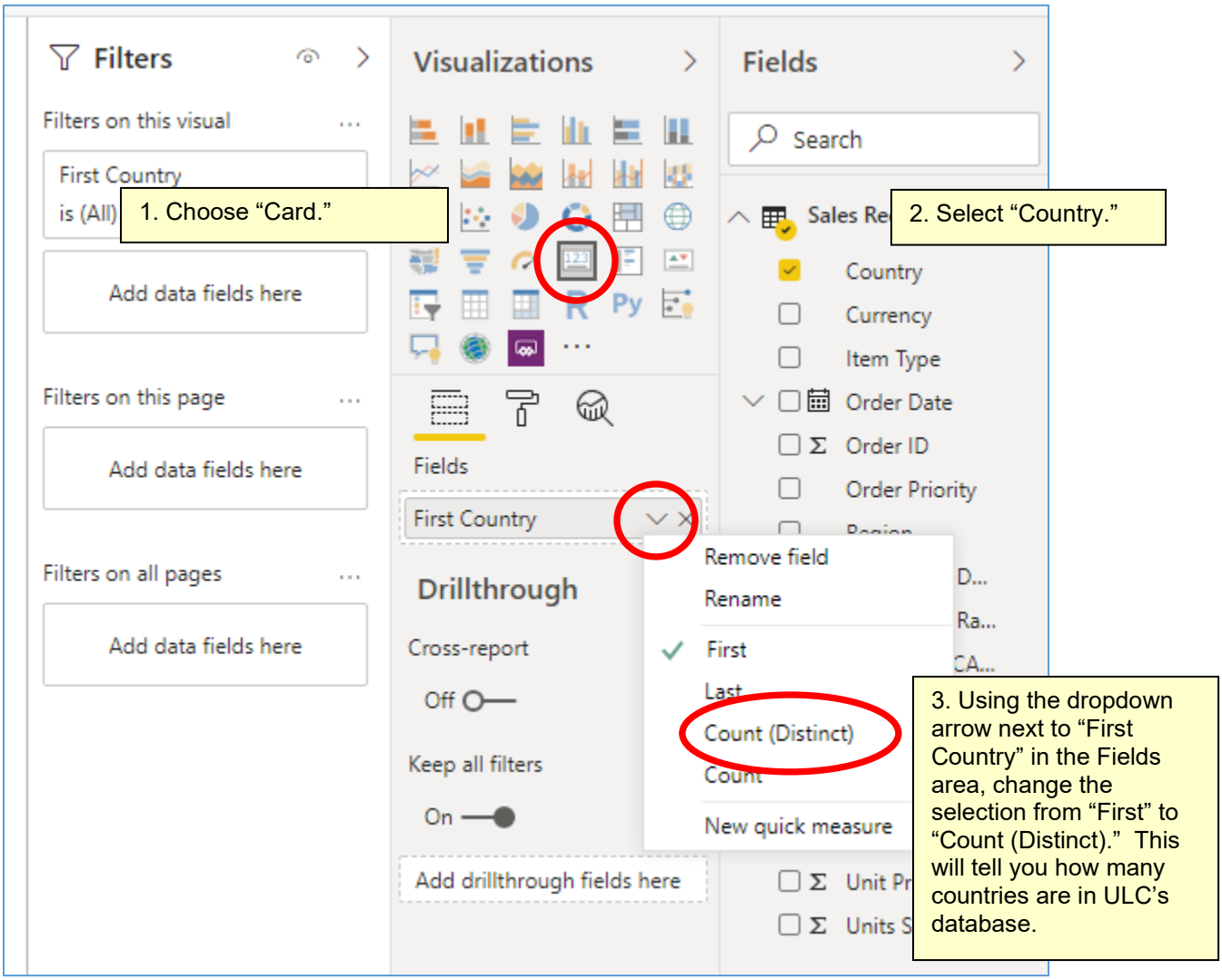


4. Select Close & Apply.

5. Return to the Report view by selecting the icon on the left of your screen.

Step 2 (Required #1):

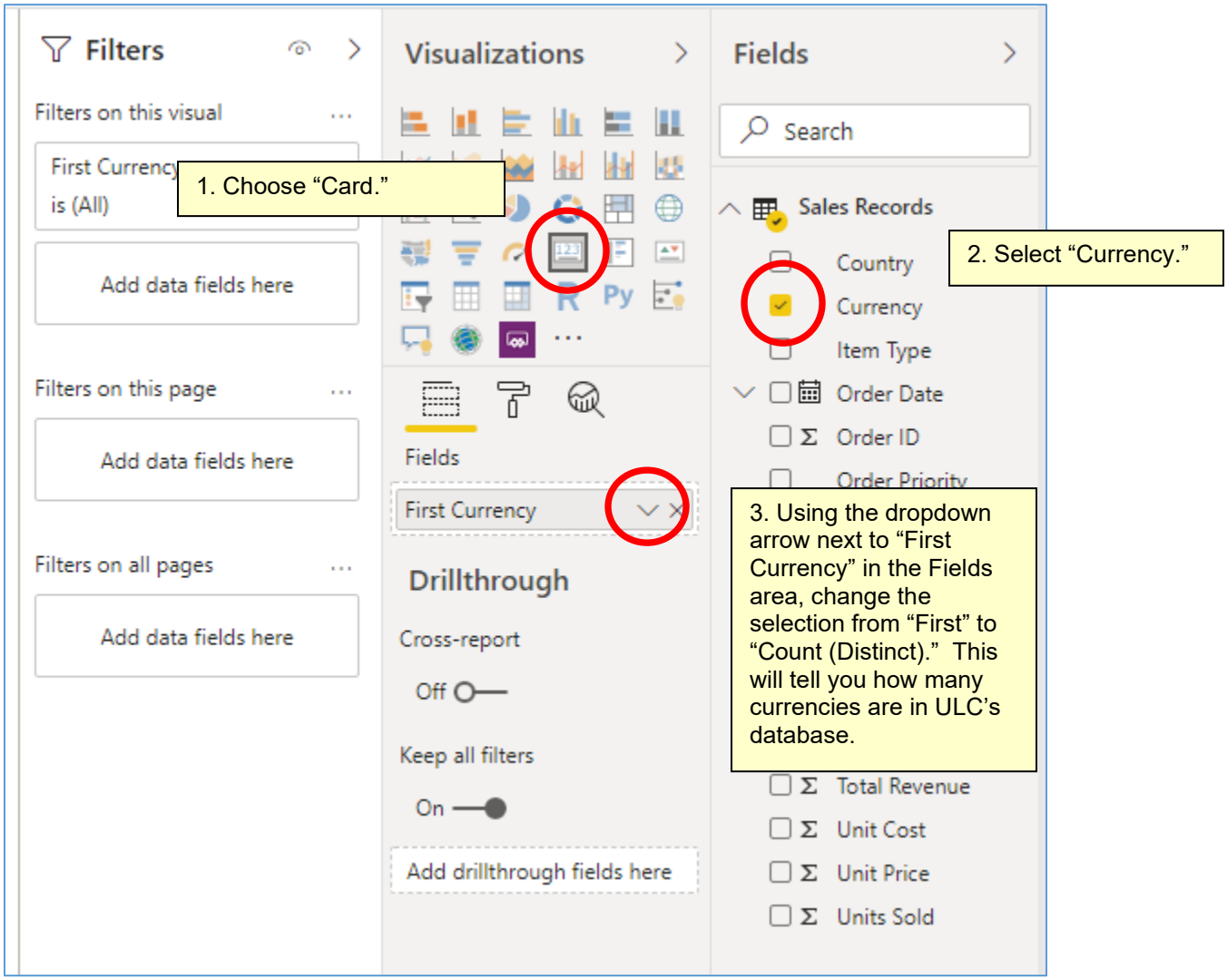
Create a visualization using the card function and the “Country” field to determine how many countries that ULC does business with.



Step 3 (Required #2):

Create a card visualization of how many different currencies ULC conducts business in.

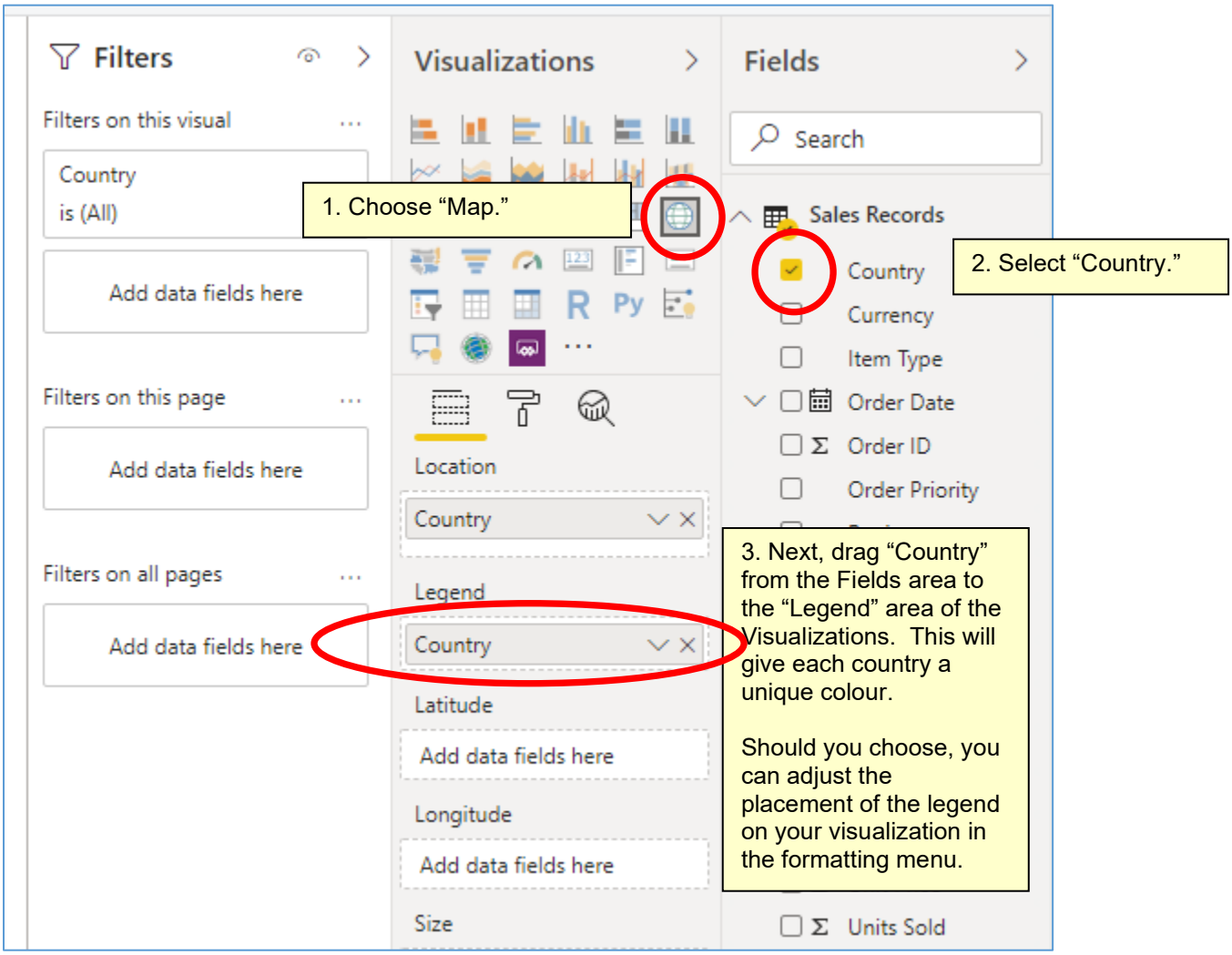
Hint: To create a new card, click anywhere on your Power BI report "Page." Then follow the steps below.



Step 4 (Required #3):

Create a map visualization of the supplier locations.

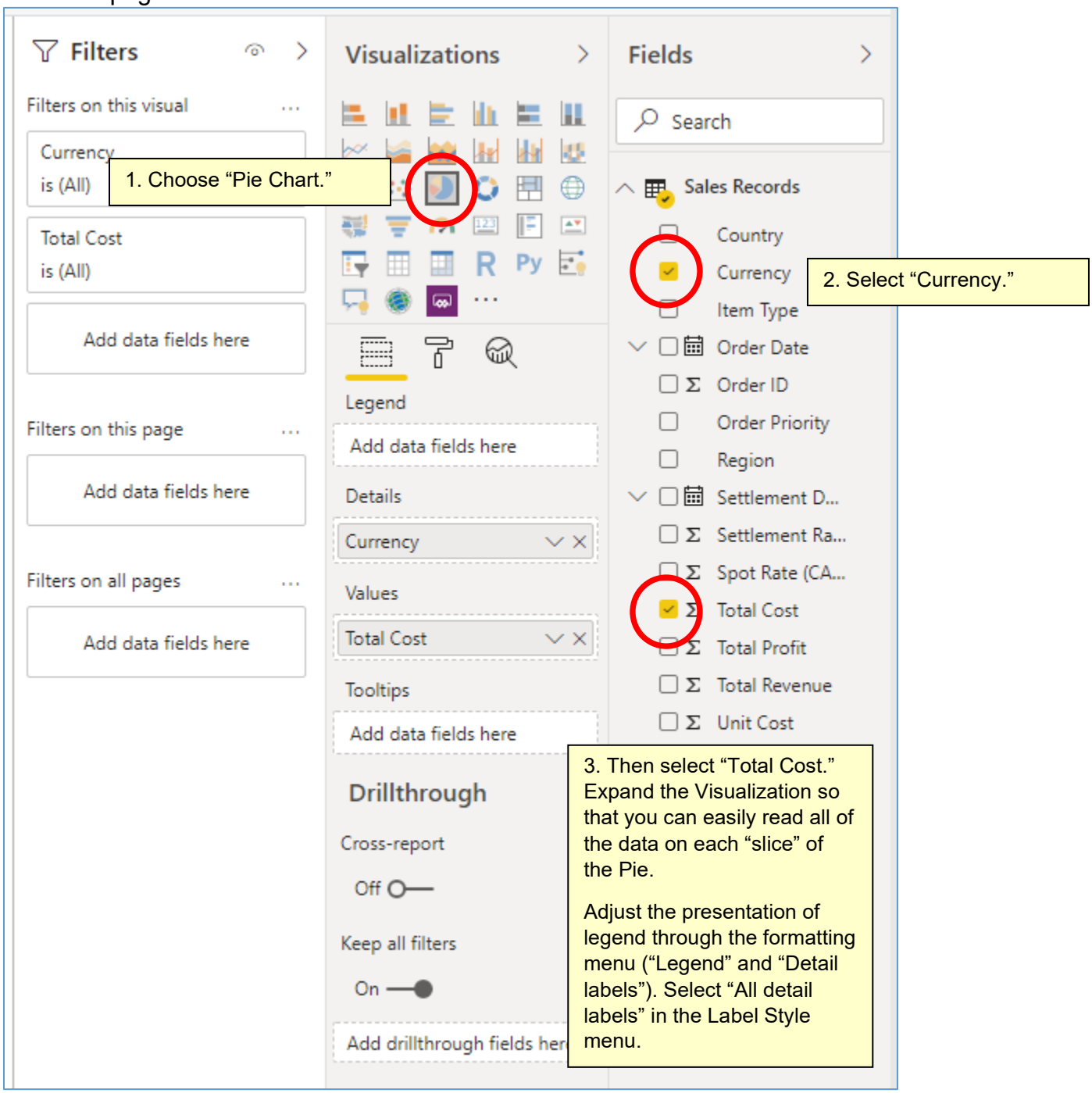
HINT: Click on the button on the lower left-hand side of your report page to generate a new page on which to create your map. Maps can be sometimes be quite large, and it is helpful to put them on their own page. You can rename each page by right clicking on the tab, just as you can in Excel.



Step 5 (Required #4):

Create a pie chart showing how much of cost of goods sold (in Canadian dollars) is spent in each *currency*.

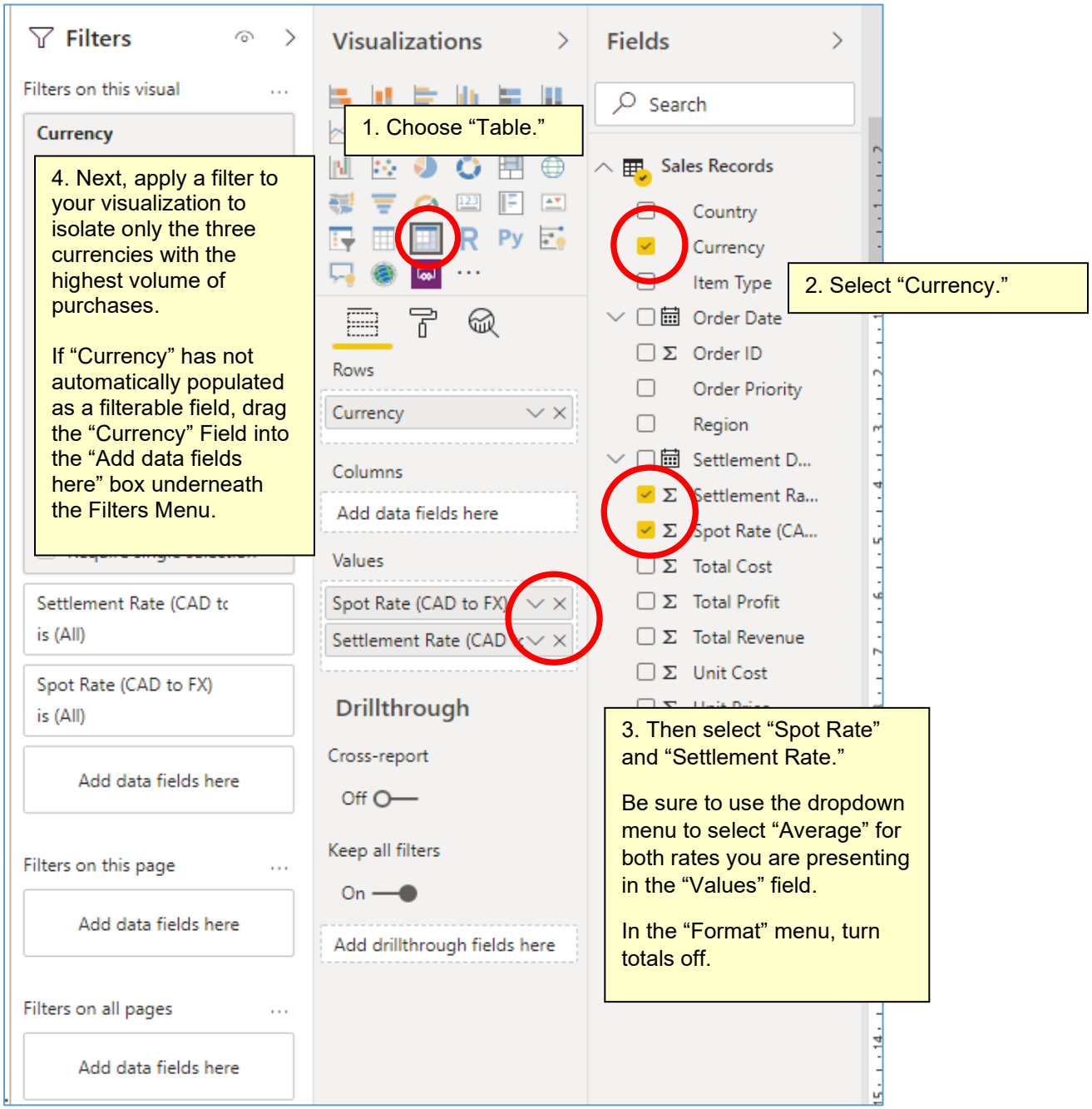
HINT: Click on the button on the lower left-hand side of your report page to generate a new page on which to create your pie chart. Charts may sometimes need to be expanded in order to understand the data presented so it is helpful to put them on their own page.



Step 6 (Required #5):

Create a table showing the foreign exchange rates in effect on the day the order was placed (the spot rate) and the day the order was paid for (the settlement rate). Paste your table with all currencies into your assignment.

ULC wants to focus on the three currencies with the greatest spend, which you have been able to identify from your pie chart above. Paste your table with the three highest spend currencies into your assignment.



Question 2

Nuts and Bolts Inc (NBI) is a public company located in Milton and prepares its financial statements in accordance with IFRS. Its year end is December 31. With the increasing population in Milton, it has found success supplying hardware stores with inventory sourced from other countries.

NBI was founded five years ago by Peter and Joshua, business partners who used to do project management in a construction company together. Joshua had an idea that if quality hardware purchases could be sourced from elsewhere and provided to local hardware stores in Milton, it would present a way to keep construction costs low for the increased population coming to the city.

NBI has never formally tracked its foreign purchases before. However, over the last three years NBI has sourced much more goods from foreign countries and would like to understand where the purchases are coming from so that a hedging strategy can be adopted.

To reduce shipping costs and earn discounts for bulk buys, NBI only purchases foreign goods once a year in each country that it deals with. It places all orders on December 15, 20X8 and takes delivery of all inventory on January 15, 20X9.

Use Power BI to provide an analysis of the transactions so Peter and Joshua can understand their foreign currency transactions.

Required:

i. Create a card visualization of how many countries NBI does business with.
ii. Create a card visualization of how many different currencies NBI conducts business in.
iii. Create a map visualization of the supplier locations.
iv. Create a pie chart showing how much of cost of goods sold (in Canadian dollars) is spent in each currency.
v. Create a table showing the foreign exchange rates in effect on the day the order was placed (the Spot rate) and the day the order was paid for (the Settlement rate).

NOTES:

NBI tracks the following information about its vendors and purchases:

- *Region:* Global geographic region (defaults to North America)
- *Country:* Country of product origin.
- *Currency:* Currency used in the Country
- *Spot Rate:* The foreign exchange rate in place on the day the order was placed

- *Settlement Rate:* The foreign exchange rate in place on the day the order was paid for.
- *Order Date:* Date the order was purchased
- *Order ID:* Unique Identifier for each item purchased
- *Settlement Date:* Date the order was paid for
- *Units Purchased:* Number of units purchased per Order ID.
- *Unit Cost:* The unit cost of each item (reported in Canadian dollars).
- *Total Cost:* Total cost of the order (Units Purchased x Unit Cost).

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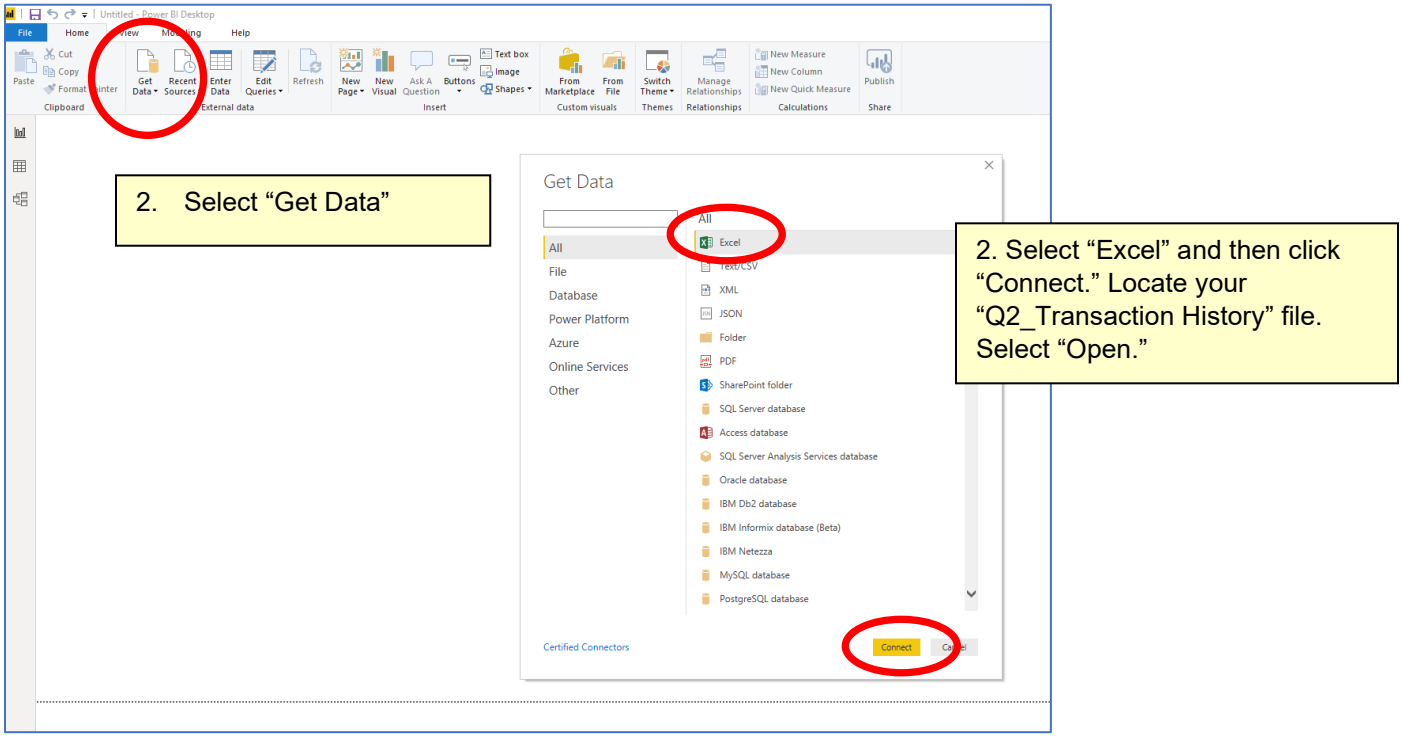
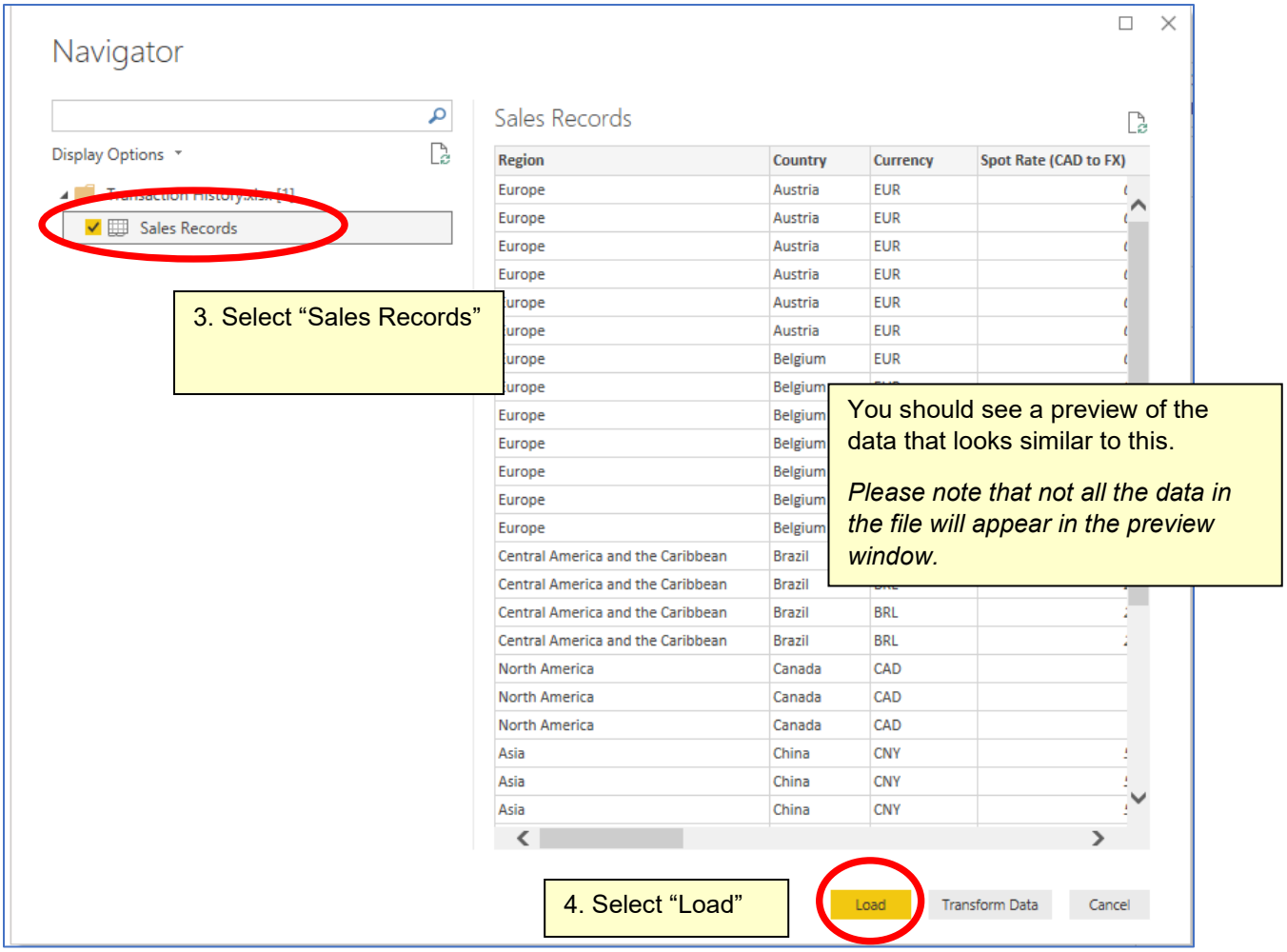
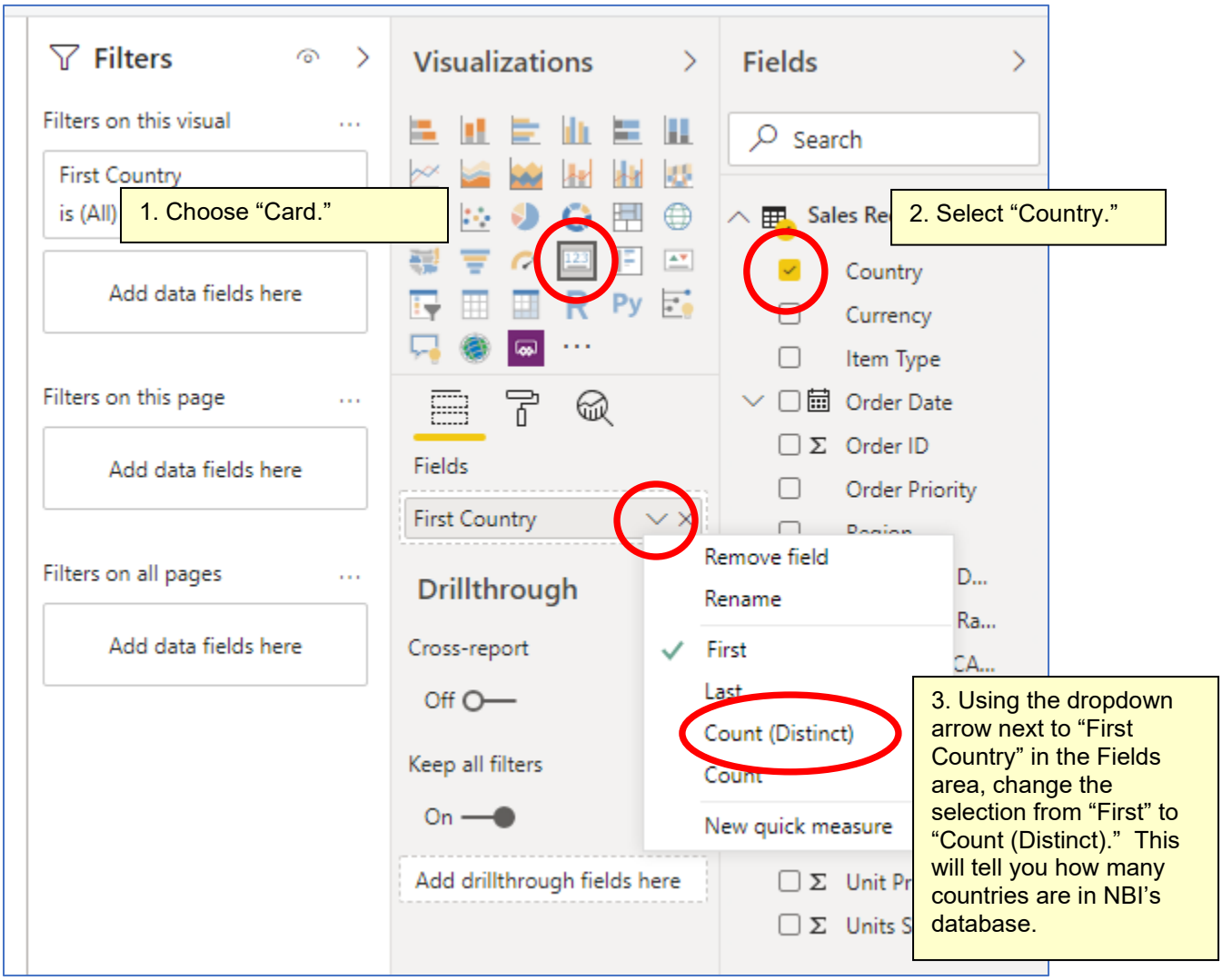



Navigator
Display Options
Sales Records
3. Select “Sales Records”
Sales Records
Region
Country
Currency
Spot Rate (CAD to FX)
You should see a preview of the data that looks similar to this.
Please note that not all the data in the file will appear in the preview window.
4. Select “Load”
Load
Transform Data
Cancel

Step 2 (Required #1):

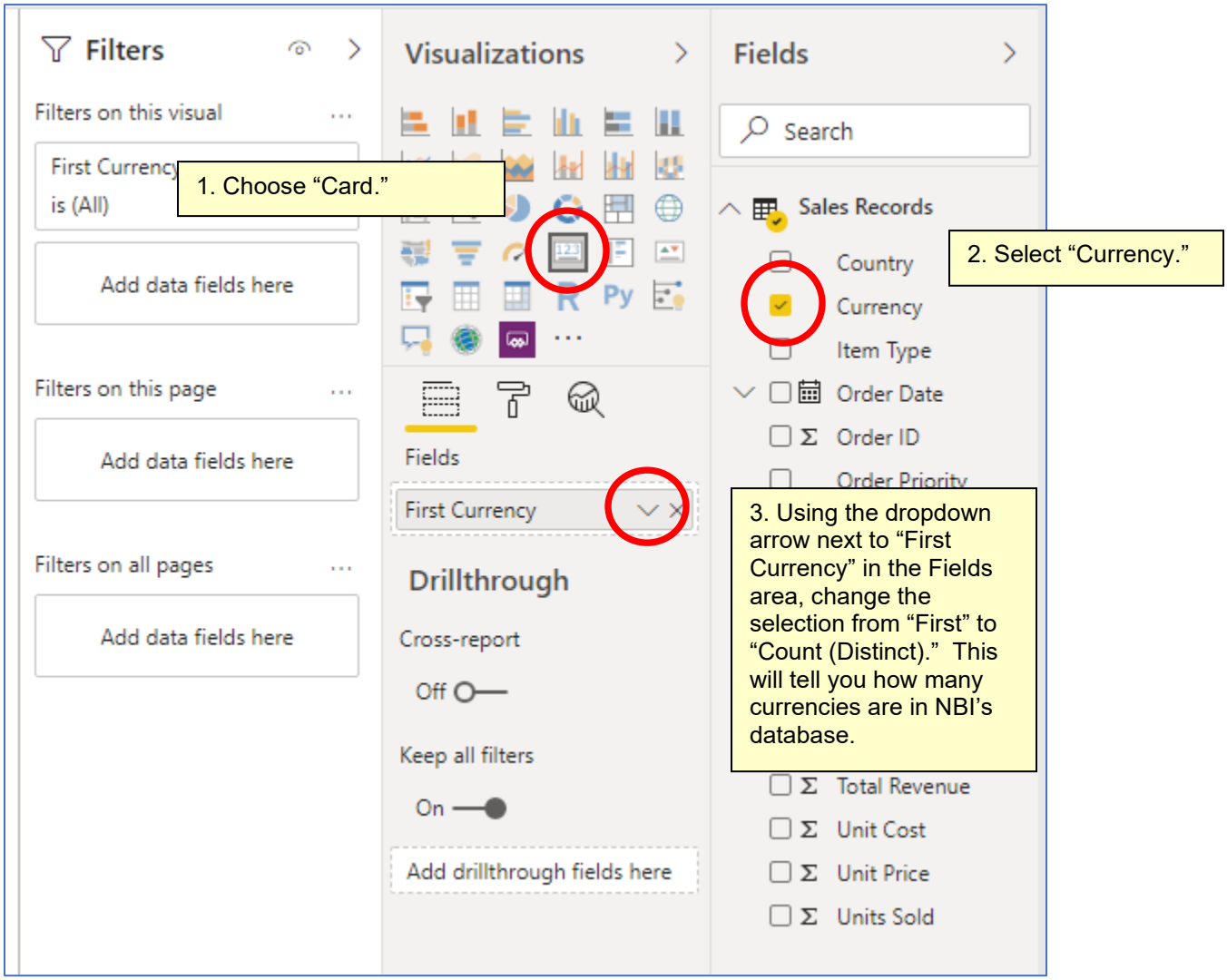
Create a visualization using the card function and the “Country” field to determine how many countries that NBI does business with.



Step 3 (Required #2):

Create a card visualization of how many different currencies NBI conducts business in.

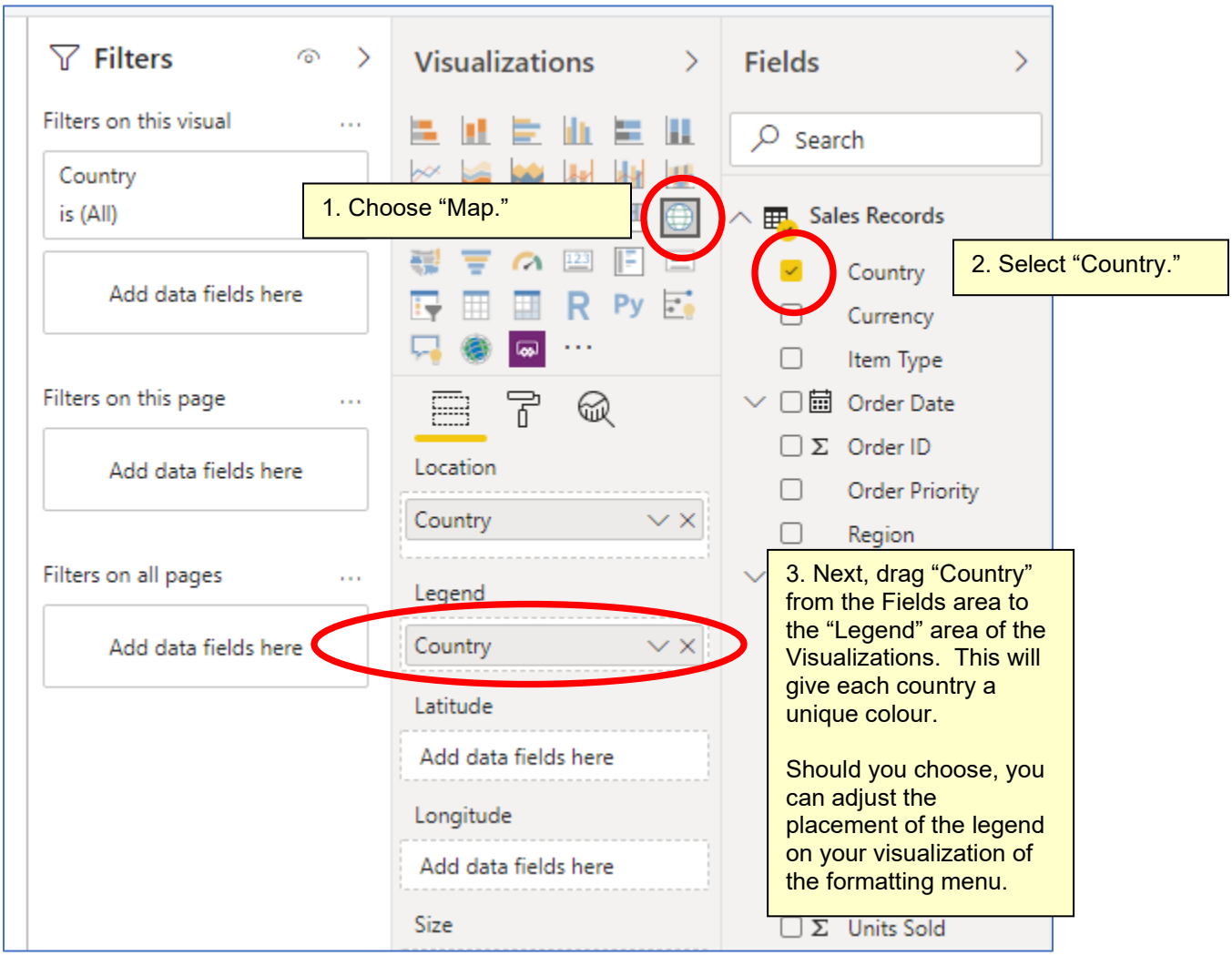
Hint: To create a new card, click anywhere on your Power BI report "Page." Then follow the steps below.



Step 4 (Required #3):

Create a map visualization of the supplier locations.

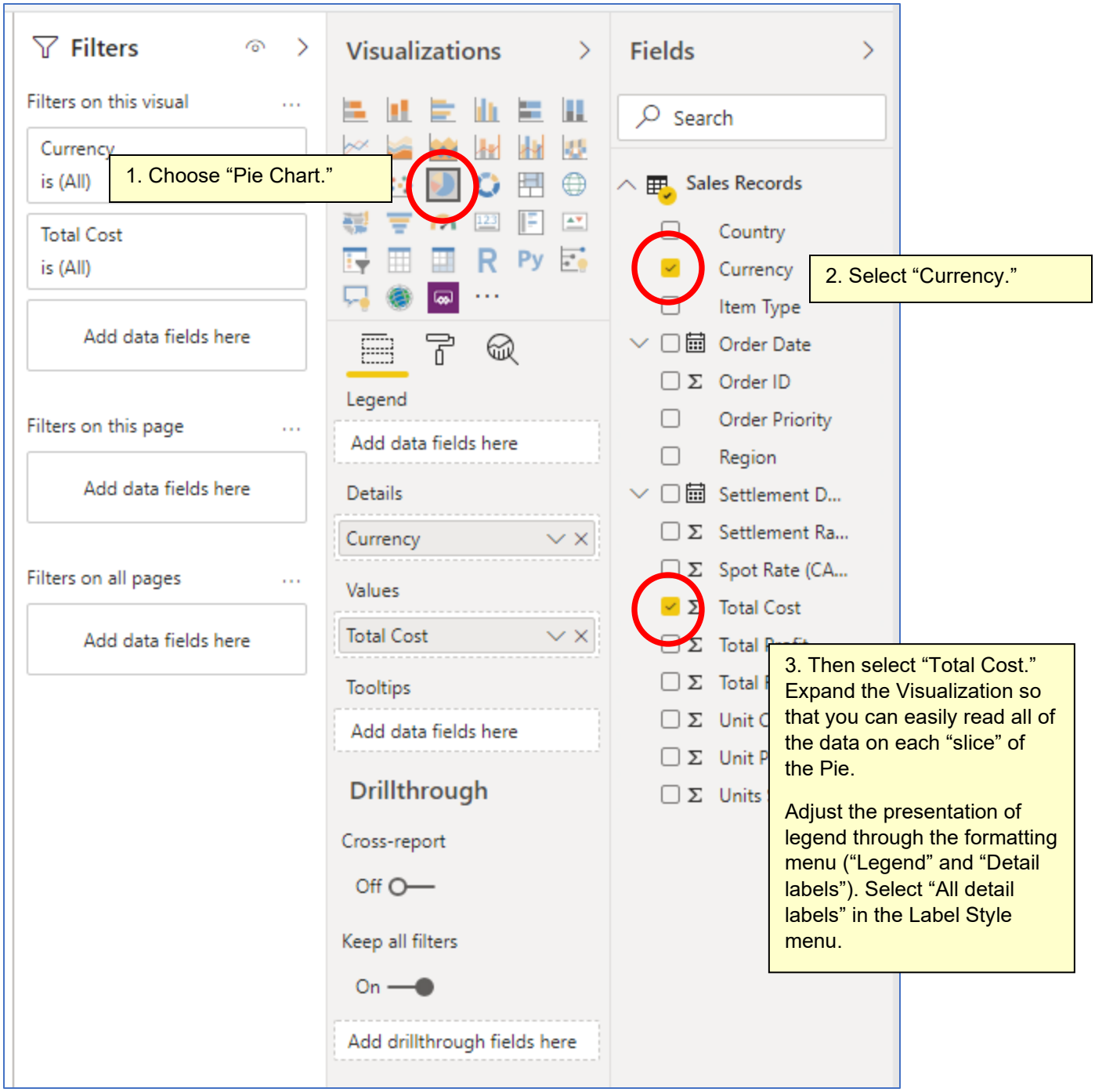
HINT: Click on the button on the lower left-hand side of your report page to generate a new page on which to create your map. Maps can be sometimes be quite large, and it is helpful to put them on their own page. You can rename each page by right clicking on the tab, just as you can in Excel.



Step 5 (Required #4):

Create a pie chart showing how much of cost of goods sold (in Canadian dollars) is spent in each currency.

HINT: Click on the button on the lower left-hand side of your report page to generate a new page on which to create your pie chart. Charts may sometimes need to be expanded in order to understand the data presented so it is helpful to put them on their own page. You can rename each page by right clicking on the tab, just as you can in Excel.


Filters
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Currency
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Total Cost
is (All)
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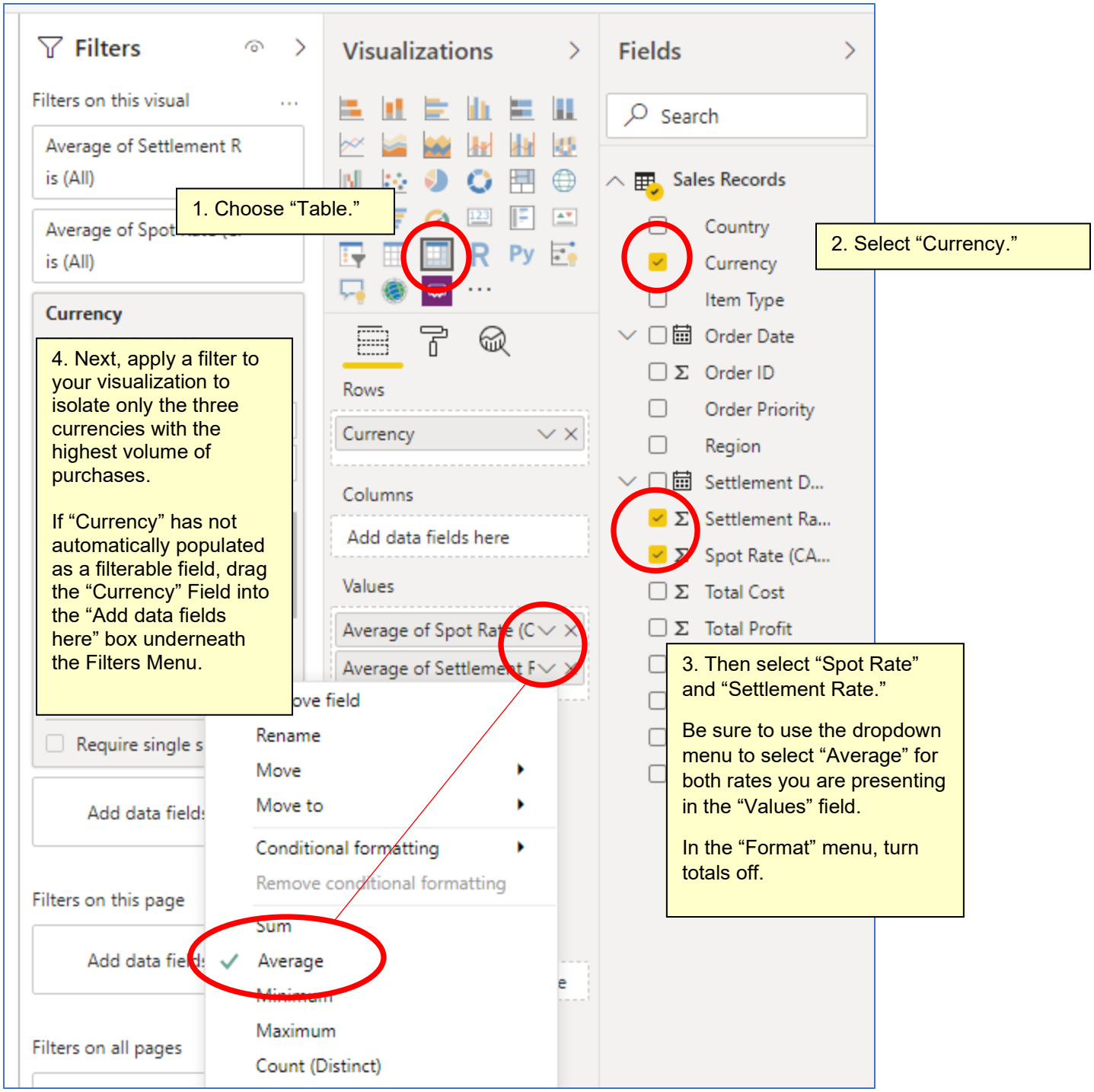
Filters on this page
Add data fields here
Filters on all pages
Add data fields here
Visualizations
Legend
Add data fields here
Details
Currency
Values
Total Cost
Tooltips
Add data fields here
Drillthrough
Cross-report
Off
Keep all filters
On
Add drillthrough fields here
Fields
Search
Sales Records
Country
Currency
Item Type
Order Date
Order ID
Order Priority
Region
Settlement D...
Settlement Ra...
Spot Rate (CA...
Total Cost
1. Choose “Pie Chart.”
2. Select “Currency.”
3. Then select “Total Cost.” Expand the Visualization so that you can easily read all of the data on each “slice” of the Pie.
Adjust the presentation of legend through the formatting menu (“Legend” and “Detail labels”). Select “All detail labels” in the Label Style menu.

Step 6 (Required #5):

Create a table showing the foreign exchange rates in effect on the day the order was placed (the spot rate) and the day the order was paid for (the settlement rate). Paste your table with all currencies into your assignment.

NBI wants to focus on the three currencies with the greatest spend, which you have been able to identify from your pie chart above. Paste your table with the three highest spend currencies into your assignment.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Order Date
Order ID
Order Priority
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Total Profit
Rename
Move
Move to
Conditional formatting
Remove conditional formatting
Sum
Average
Maximum
Count (Distinct)
Filters on this page
Filters on all pages
Add data fields
Require single s
1. Choose "Table."
2. Select "Currency."
3. Then select "Spot Rate" and "Settlement Rate."
Be sure to use the dropdown menu to select "Average" for both rates you are presenting in the "Values" field.
In the "Format" menu, turn totals off.
4. Next, apply a filter to your visualization to isolate only the three currencies with the highest volume of purchases.
If "Currency" has not automatically populated as a filterable field, drag the "Currency" Field into the "Add data fields here" box underneath the Filters Menu.

Question 3

You, CPA, work as an associate with a financial and business advisory firm. Great Retrofits Ltd. (GRL), a client of your firm, is a large Canadian company that owns and operates across Canada retrofitting older structures and assets to extend their useful life.

You have been asked by the company's chief financial officer (CFO) to complete a special project that will have significant impacts on the future of how GRL measures its foreign currency transactions.

Over the past 3 years, GRL has grown significantly. The amount of U.S. dollar purchases being undertaken to obtain the inventory required has also increased, though this is not currently being tracked. The CFO has heard that hedging may be a way to alleviate exchange rate fluctuations and has asked you to gather information on the foreign transactions that have occurred over the past two years, so that the Board of Directors can determine if a hedging strategy is needed going forward.

Required:

Using Power BI, provide the CFO with the following information on foreign currency transactions:

1. A card visualization which shows the number of U.S. dollar transactions over the past two years.
2. A stacked column chart showing the U.S. dollar transactions compared to CAD transactions.
3. A table showing the dollar value of U.S. dollar transactions compared to CAD transactions.

NOTES:

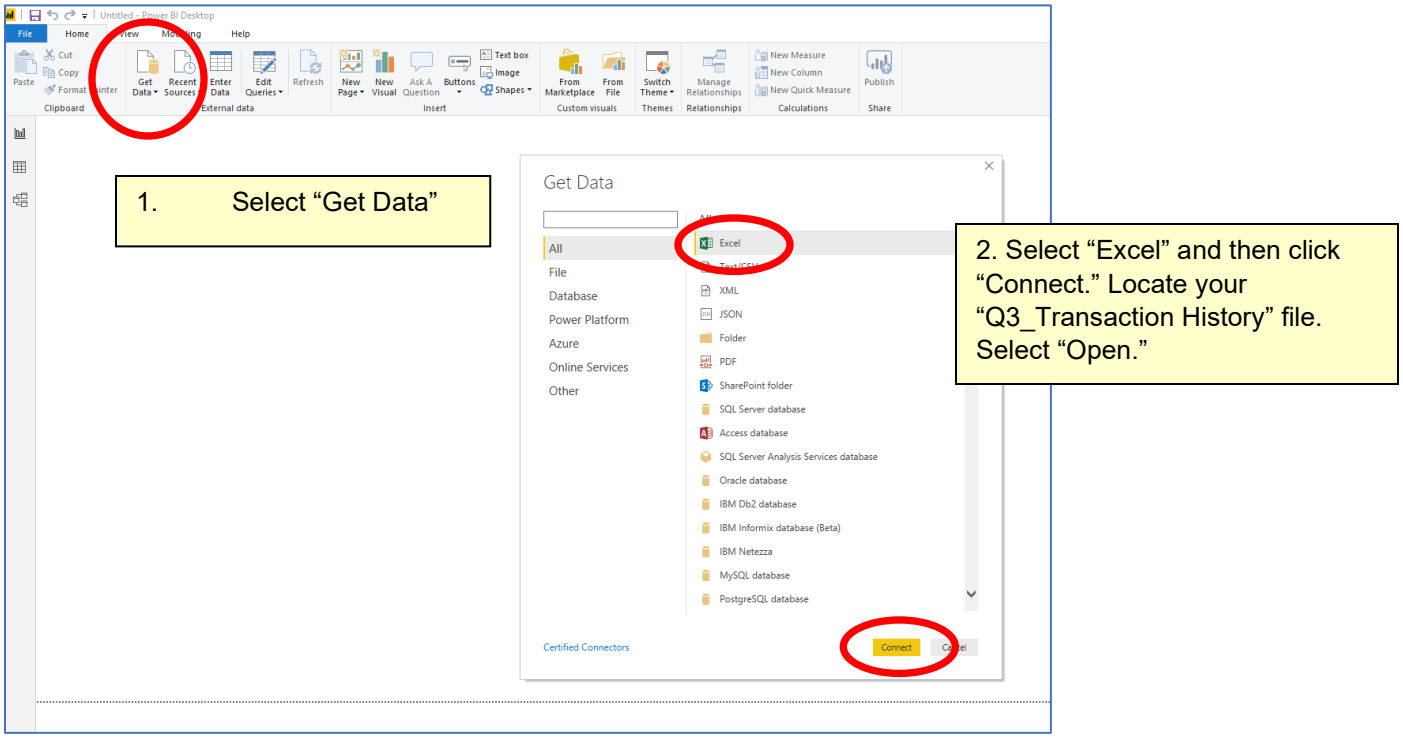
GRL tracks the following information about its vendors:

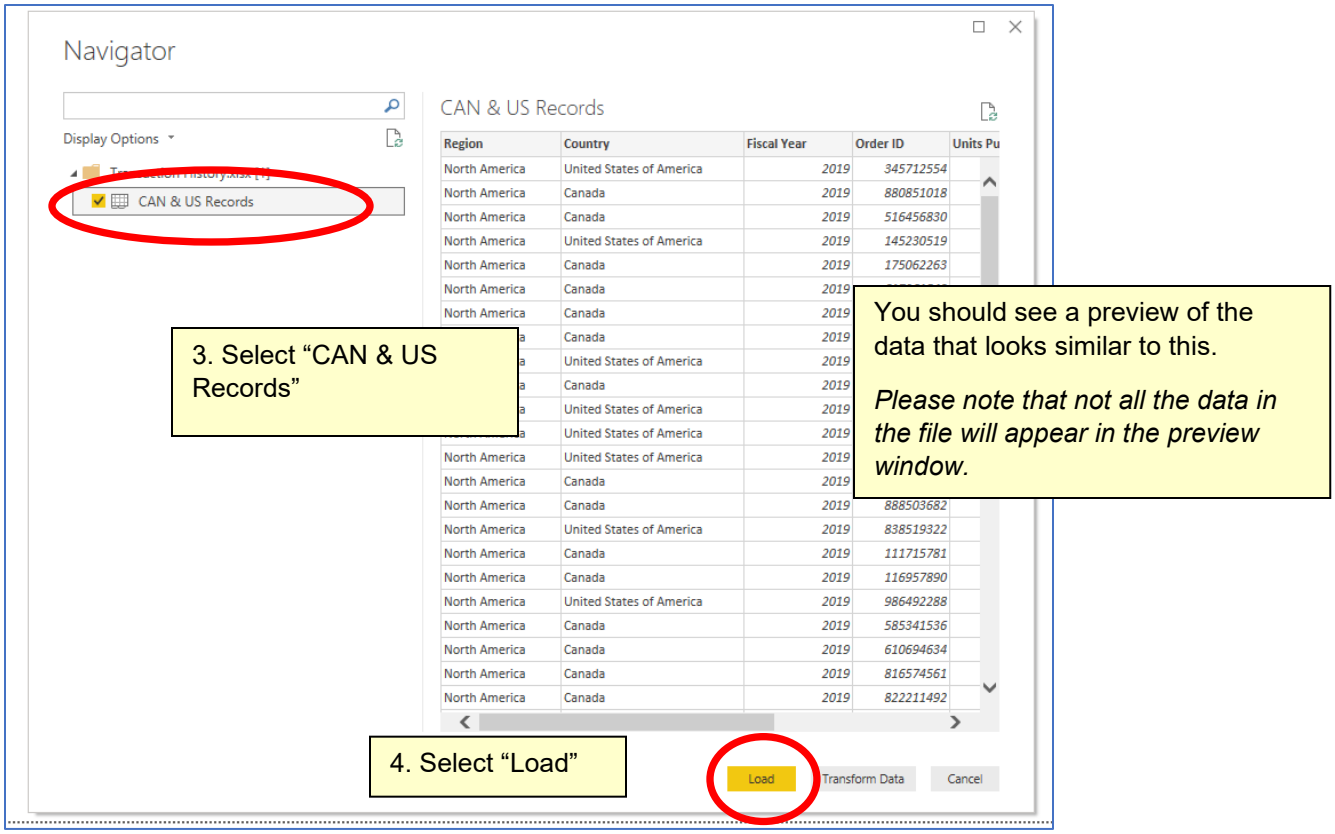
1. *Region:* Global geographic region (defaults to North America)
2. *Country:* Country of product origin.
3. *Fiscal Year:* Year of purchase
4. *Order ID:* Unique Identifier for each item purchased.
5. *Units Purchased:* Number of units purchased per Order ID.
6. *Unit Cost:* The unit cost of each item (reported in Canadian dollars).
7. *Total Cost:* Total cost of the order (Units Purchased x Unit Cost).

Appendix I

Step 1:

Open Power BI and import your data.




Navigator
Display Options
CAN & US Records
CAN & US Records
Region
Country
Fiscal Year
Order ID
Units Pu
North America United States of America 2019 345712554
North America Canada 2019 880851018
North America Canada 2019 516456830
North America United States of America 2019 145230519
North America Canada 2019 175062263
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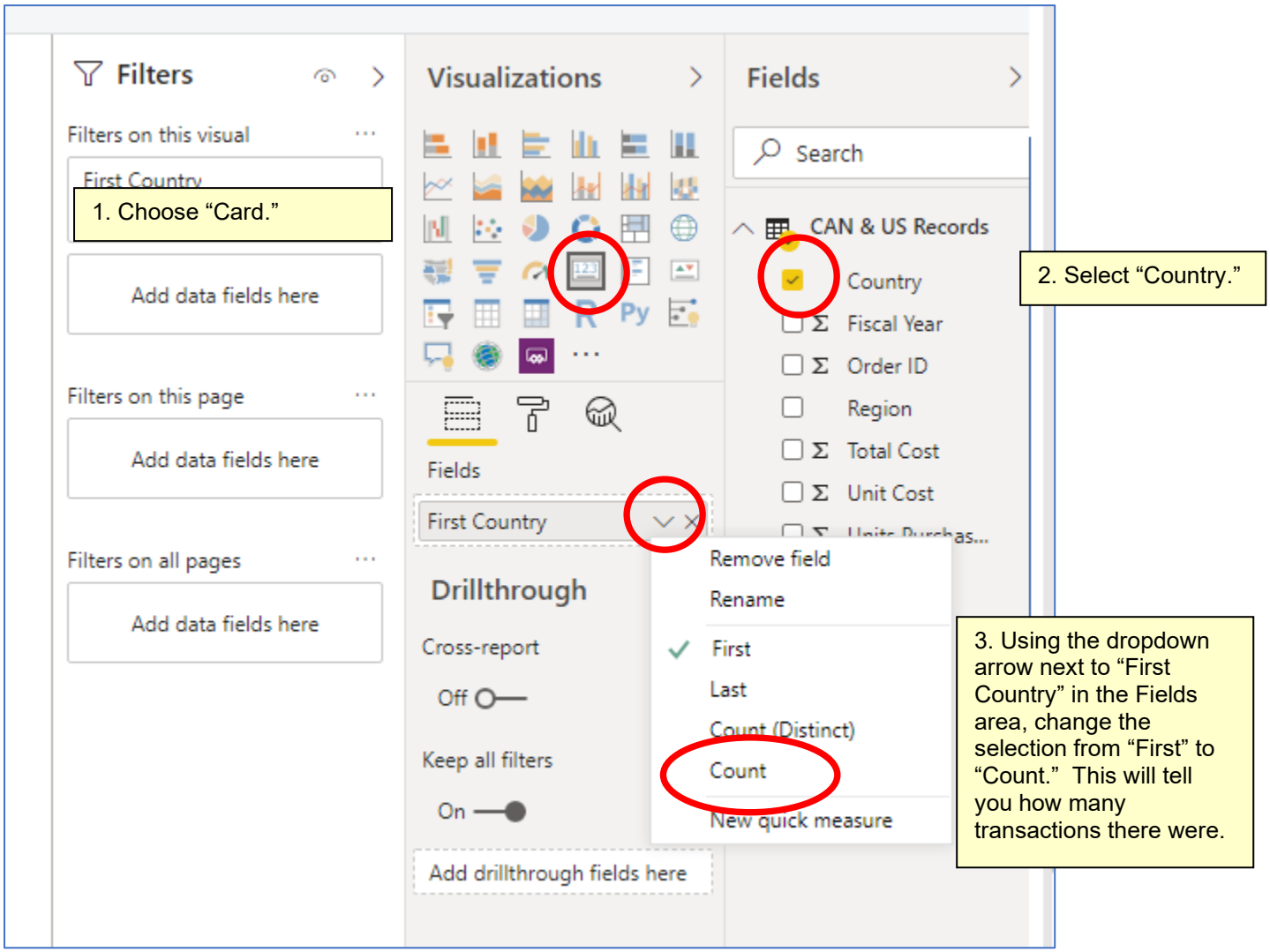
North America Canada 2019 888503682
North America United States of America 2019 838519322
North America Canada 2019 111715781
North America Canada 2019 116957890
North America United States of America 2019 986492288
North America Canada 2019 585341536
North America Canada 2019 610694634
North America Canada 2019 816574561
North America Canada 2019 822211492
3. Select "CAN & US Records"
You should see a preview of the data that looks similar to this.
Please note that not all the data in the file will appear in the preview window.
4. Select "Load"
Load
Transform Data
Cancel

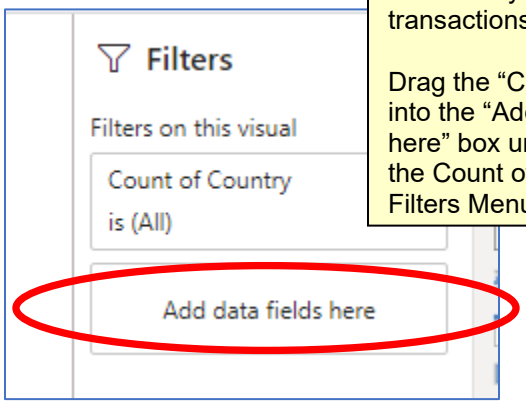
Step 2 (Required #1):

Create a visualization using the card function and the “Country” field to determine how many purchases were made using USD.



4. Next, apply a filter to your visualization to isolate only USD transactions.

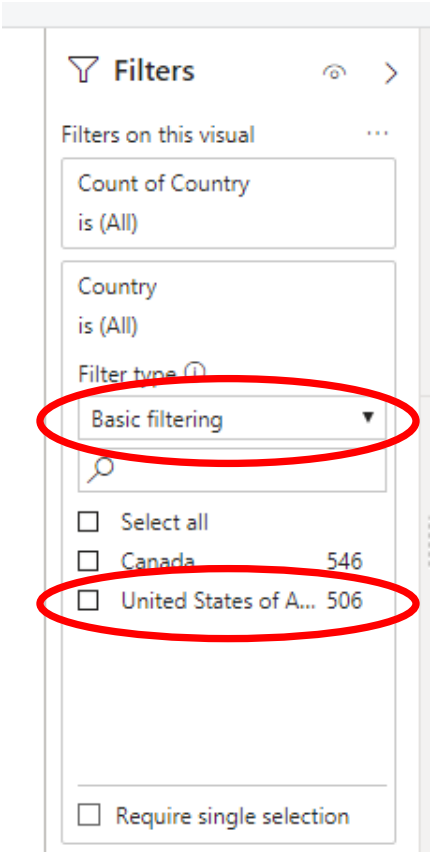
Drag the “Country” Field into the “Add data fields here” box underneath the Count of Country Filters Menu.



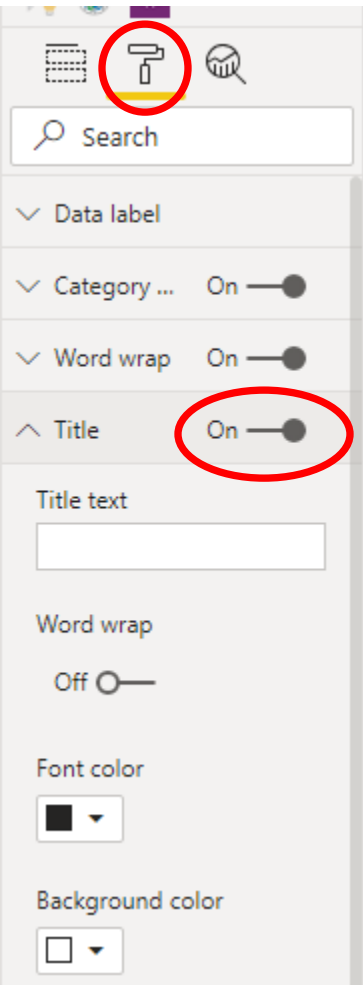
5. Under Filter type, select Basic Filtering.

Next, select “United States of America.”

Your card should now only display the number of USD transactions.



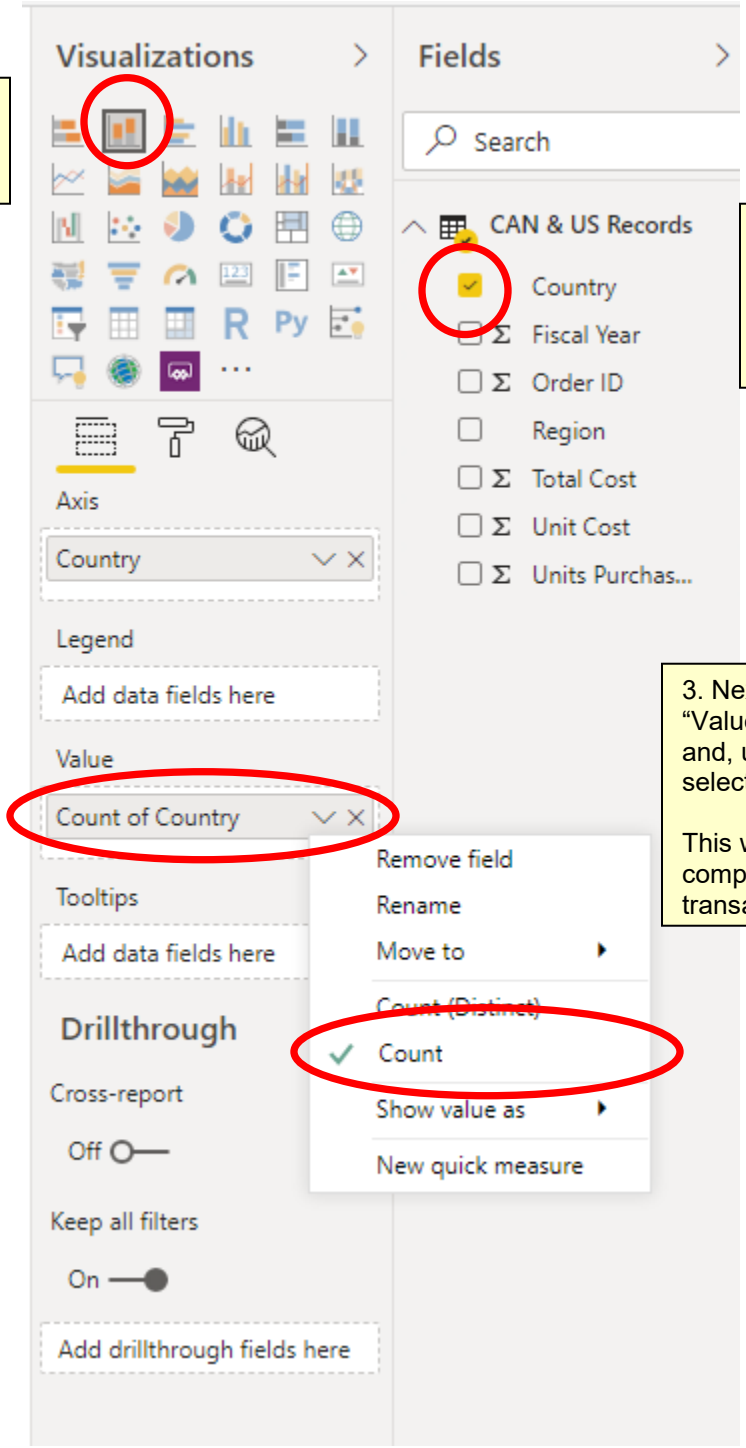
Select the format icon and turn title on. Give your visualization a title.



Step 3 (Required #2):

Create a stacked column chart showing the number of USD transactions compared to CAD transactions.

1. Choose "Stacked Column Chart."

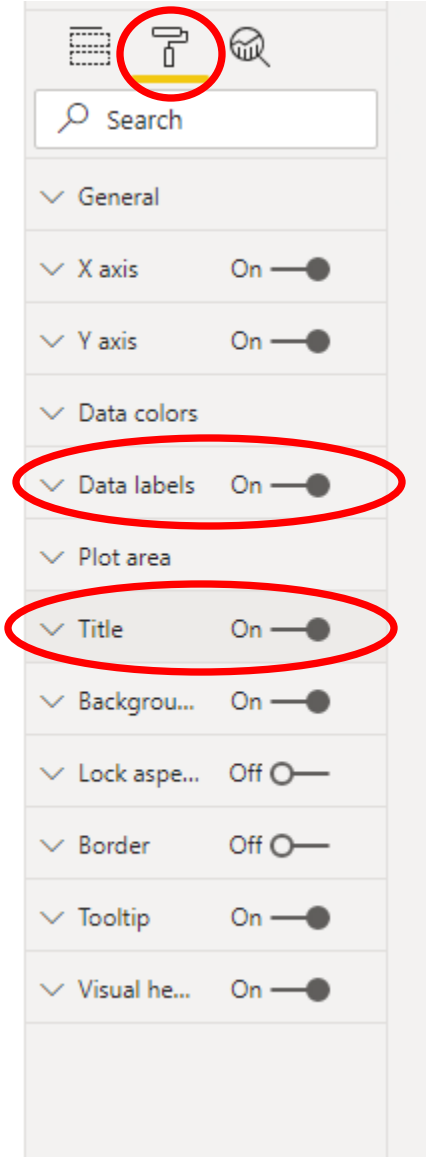


2. Select "Country."

This will populate the "Axis" field of your visualization.

3. Next, drag "Country" into the "Value" field of your visualization and, using the dropdown arrow, select "Count."

This will give you a side by side comparison of the number of transactions.

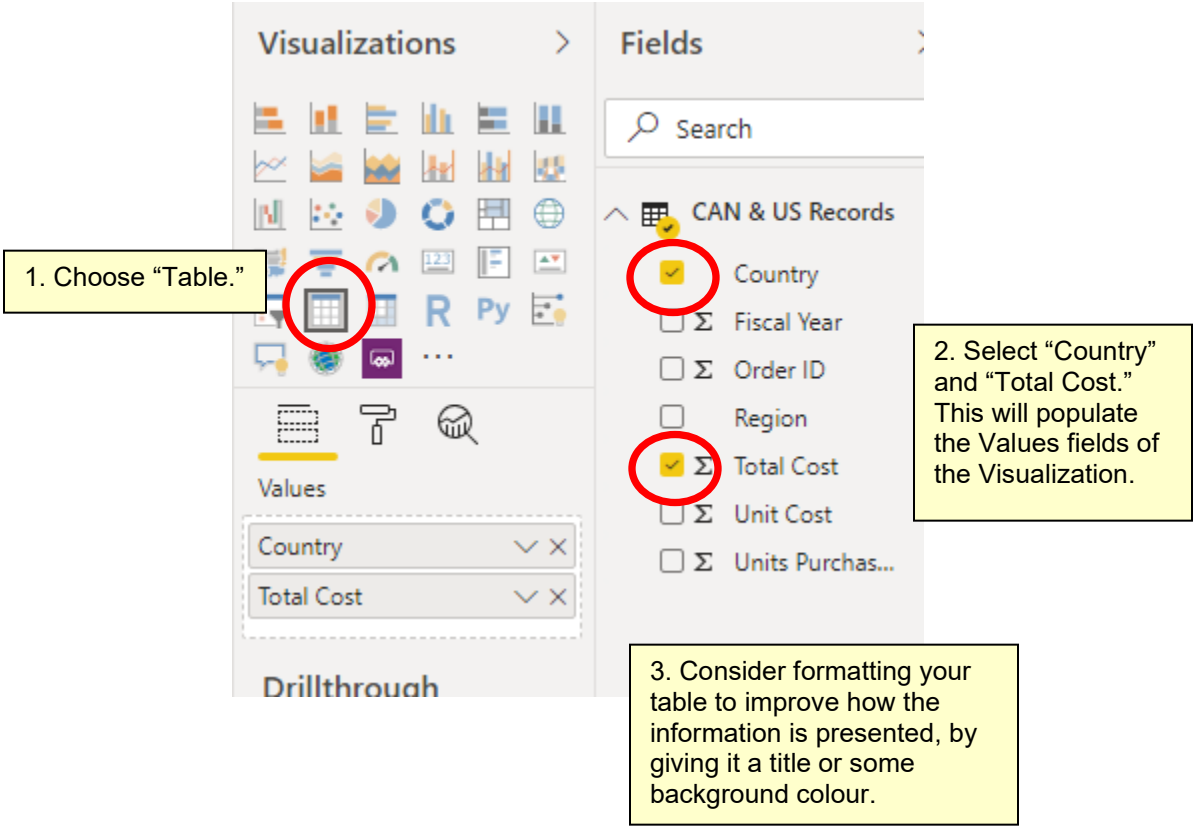


4. To increase the impact of your visualization, you can choose a variety of formatting options, located on the Visualization Menu.

Try adding a Title to your Visualization, and turning Data labels on.

Step 4 (Required #3):

Create a table chart showing the dollar value of USD transactions compared to CAD transactions.



Solutions

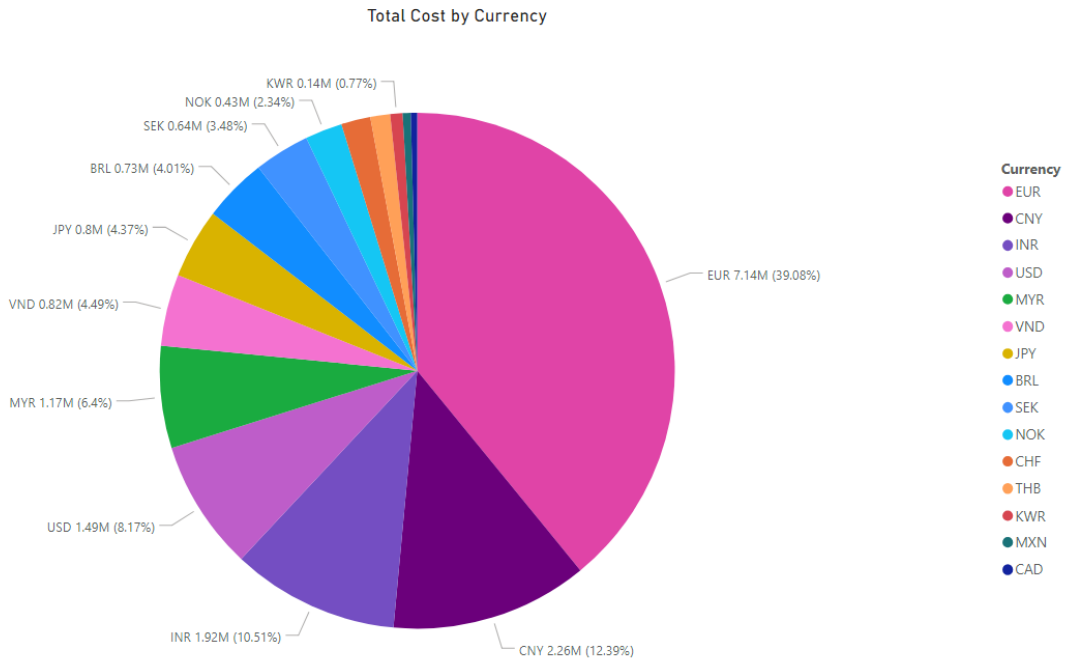
Solution to Question 1

Required #1:

Required #2:

Required #3:

Required #4:



Required #5:

Currency	Average of Spot Rate (CAD to FX)	Average of Settlement Rate (CAD to FX)
BRL	2.92	3.21
CAD	1.00	1.10
CHF	0.75	0.82
CNY	5.16	5.68
EUR	1.25	1.38
INR	53.79	59.17
JPY	84.82	93.30
KWR	847.46	932.20
MXN	15.19	16.71
MYR	3.13	3.44
NOK	6.45	7.09
SEK	6.78	7.46
THB	24.53	26.99
USD	0.75	0.82
VND	17,543.86	19,298.25

Filtered:

Currency	Average of Spot Rate (CAD to FX)	Average of Settlement Rate (CAD to FX)
INR	53.79	59.17
CNY	5.16	5.68
EUR	1.25	1.38

Solution to Question 2

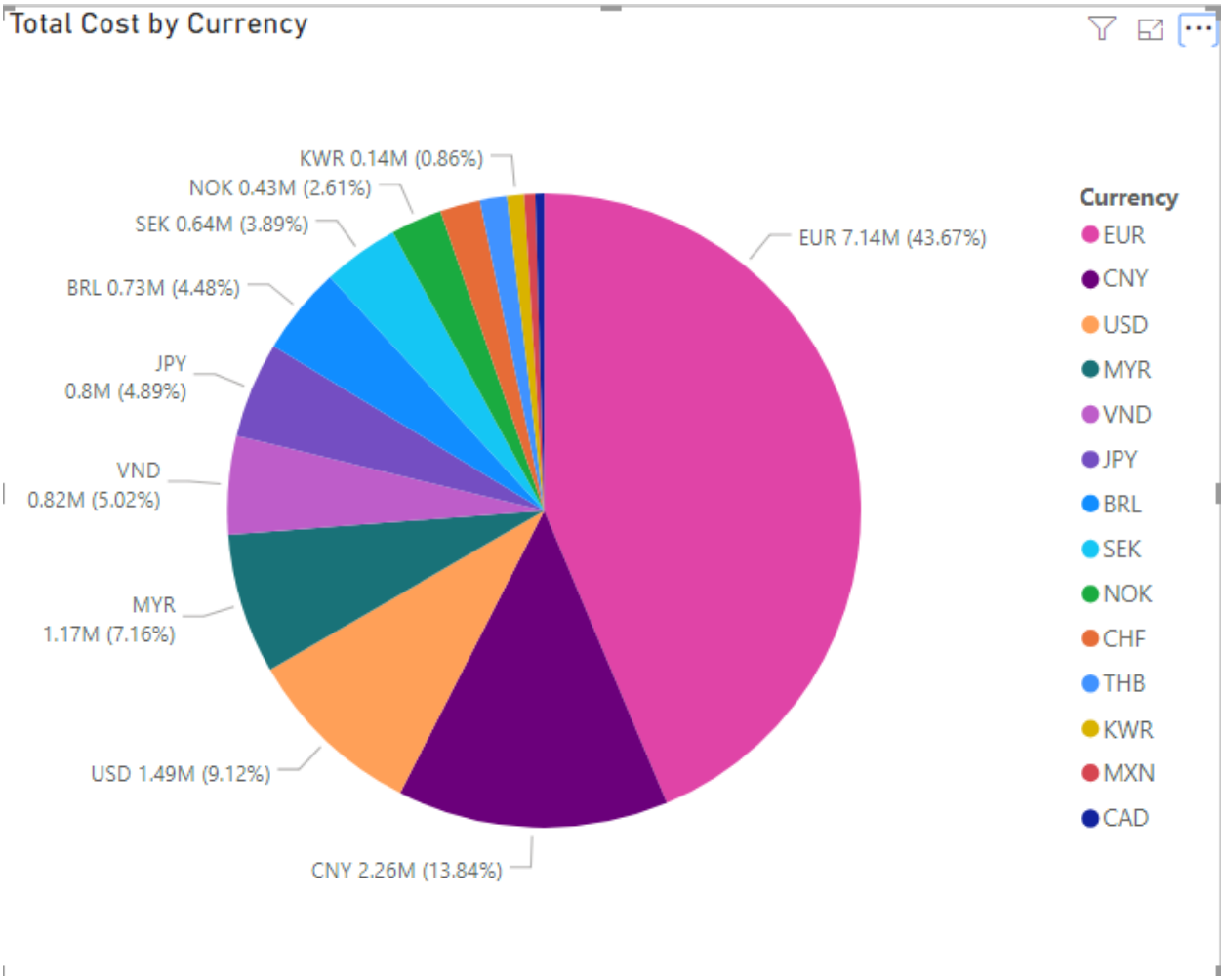
Required #1:

Required #2:

Required #3:

Countries of Supply
NORTH AMERICA
EUROPE
ASIA
Atlantic Ocean
AFRICA
SOUTH AMERICA
Indian Ocean
AUSTRALIA
Bing
© 2019 HERE, © 2019 Microsoft Corporation Terms
Country
Austria
Belgium
Brazil
Canada
China
Estonia
Finland
France
Germany
Greece
Italy
Jamaica
Japan
Malaysia
Mexico
Netherlands
Norway
Portugal
South Korea
Sweden

Required #4:


Total Cost by Currency
KWR 0.14M (0.86%)
NOK 0.43M (2.61%)
SEK 0.64M (3.89%)
BRL 0.73M (4.48%)
JPY
0.8M (4.89%)
VND
0.82M (5.02%)
MYR
1.17M (7.16%)
USD 1.49M (9.12%)
CNY 2.26M (13.84%)
EUR 7.14M (43.67%)
Currency
EUR
CNY
USD
MYR
VND
JPY
BRL
SEK
NOK
CHF
THB
KWR
MXN
CAD

Required #5:

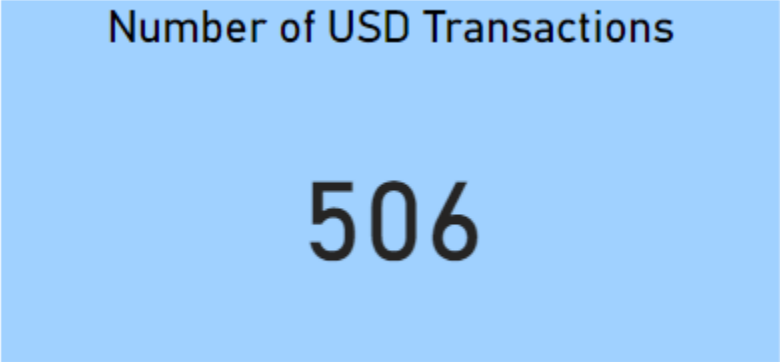
Currency	Average of Spot Rate (CAD to FX)	Average of Settlement Rate (CAD to FX)
VND	17,543.86	19,298.25
KWR	847.46	932.20
JPY	84.82	93.30
THB	24.53	26.99
MXN	15.19	16.71
SEK	6.78	7.46
NOK	6.45	7.09
CNY	5.16	5.68
MYR	3.13	3.44
BRL	2.92	3.21
EUR	1.25	1.38
CAD	1.00	1.10
USD	0.75	0.82
CHF	0.75	0.82

Filtered:

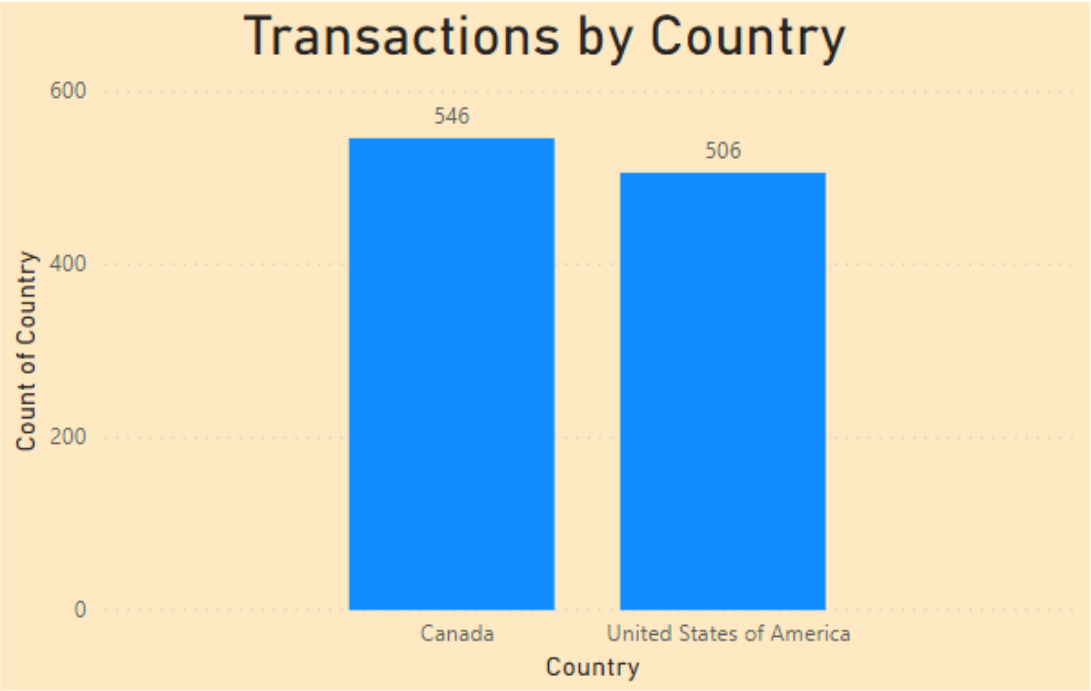
Currency	Average of Spot Rate (CAD to FX)	Average of Settlement Rate (CAD to FX)
USD	0.75	0.82
EUR	1.25	1.38
CNY	5.16	5.68

Solution to Question 3

Required #1:



Required #2:



Required #3:

Purchases in USD and CAD over the past 2 years

Country	Total Cost
United States of America	443,673,398.61
Canada	527,534,519.95
Total	**971,207,918.56**