

# Filtering an analysis based on another analysis

July 2016  
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# Learning outcomes

- Understand how to filter an analysis based on another analysis
- Understand how to add the SUM(DISTINCT) function to a column's formula
- Understand how to create a rolling date (for months)

# Example scenario

Goal: create a report to aid claiming unreceived periodical issues for subscriptions with 4 copies on order

The first analysis has 3 columns and two filters:

**Subscriptions with 4 copies base report**

Criteria Results Prompts Advanced

**Subject Areas**

- Physical Items
  - Physical Item Details
  - Holding Details
  - Item Creation Date
  - Item Modification Date
  - Bibliographic Details
  - Library Unit
  - Location
  - LC Classifications
  - Dewey Classifications
  - Temporary Location
  - PO Line
  - Fund Information - Under Constr
  - Institution

**Selected Columns**

Double click on column names in the Subject Areas pane to add them to the analysis criteria, apply sorting, or delete by clicking or hovering over the button next to it.

- Bibliographic Details
  - Title
  - MMS Id
- PO Line
  - SUM(DISTINCT Quantity for Pricing)

**Filters**

Add filters to the analysis criteria by clicking on Filter option for the specific column. Save filter by clicking on add button after selecting its name in the catalog pane.

- Lifecycle is not equal to / is not in Deleted
- AND SUM(DISTINCT Quantity for Pricing) is equal to / is in 4

To create the SUM(DISTINCT Quantity for Pricing) filter, start with Quantity for Pricing from the PO Line folder:

The screenshot displays a software interface with a 'Criteria' tab and several sub-tabs: 'Results', 'Prompts', and 'Advanced'. On the left, the 'Subject Areas' pane shows a tree view of folders: 'Physical Items', 'Physical Item Details', 'Holding Details', 'Item Creation Date', 'Item Modification Date', 'Bibliographic Details', 'Library Unit', 'Location', 'LC Classifications', 'Dewey Classifications', 'Temporary Location', 'PO Line', 'Fund Information - Under Constr', and 'Institution'. A yellow arrow points from the 'PO Line' folder to the 'Quantity for Pricing' column in the 'Selected Columns' pane. The 'Selected Columns' pane contains a table with columns 'Bibliographic Details' and 'PO Line', and rows 'Title', 'MMS Id', and 'Quantity for Pricing'. A context menu is open over 'Quantity for Pricing', listing options: 'Sort', 'Edit formula', 'Column Properties', 'Filter', and 'Delete'. The 'Edit formula' option is highlighted, and a yellow arrow points from it to a separate 'Edit formula' button. Below the 'Selected Columns' pane is the 'Filters' section, which includes instructions on how to add filters to the analysis criteria.

**Criteria** Results Prompts Advanced

**Subject Areas**

- Physical Items
  - Physical Item Details
  - Holding Details
  - Item Creation Date
  - Item Modification Date
  - Bibliographic Details
  - Library Unit
  - Location
  - LC Classifications
  - Dewey Classifications
  - Temporary Location
  - PO Line
  - Fund Information - Under Constr
  - Institution

**Selected Columns**

Double click on column names in the Subject Areas pane to add them to the analysis. Once added, c filters, apply sorting, or delete by clicking or hovering over the button next to its name.

| Bibliographic Details | PO Line              |
|-----------------------|----------------------|
| Title                 | Quantity for Pricing |

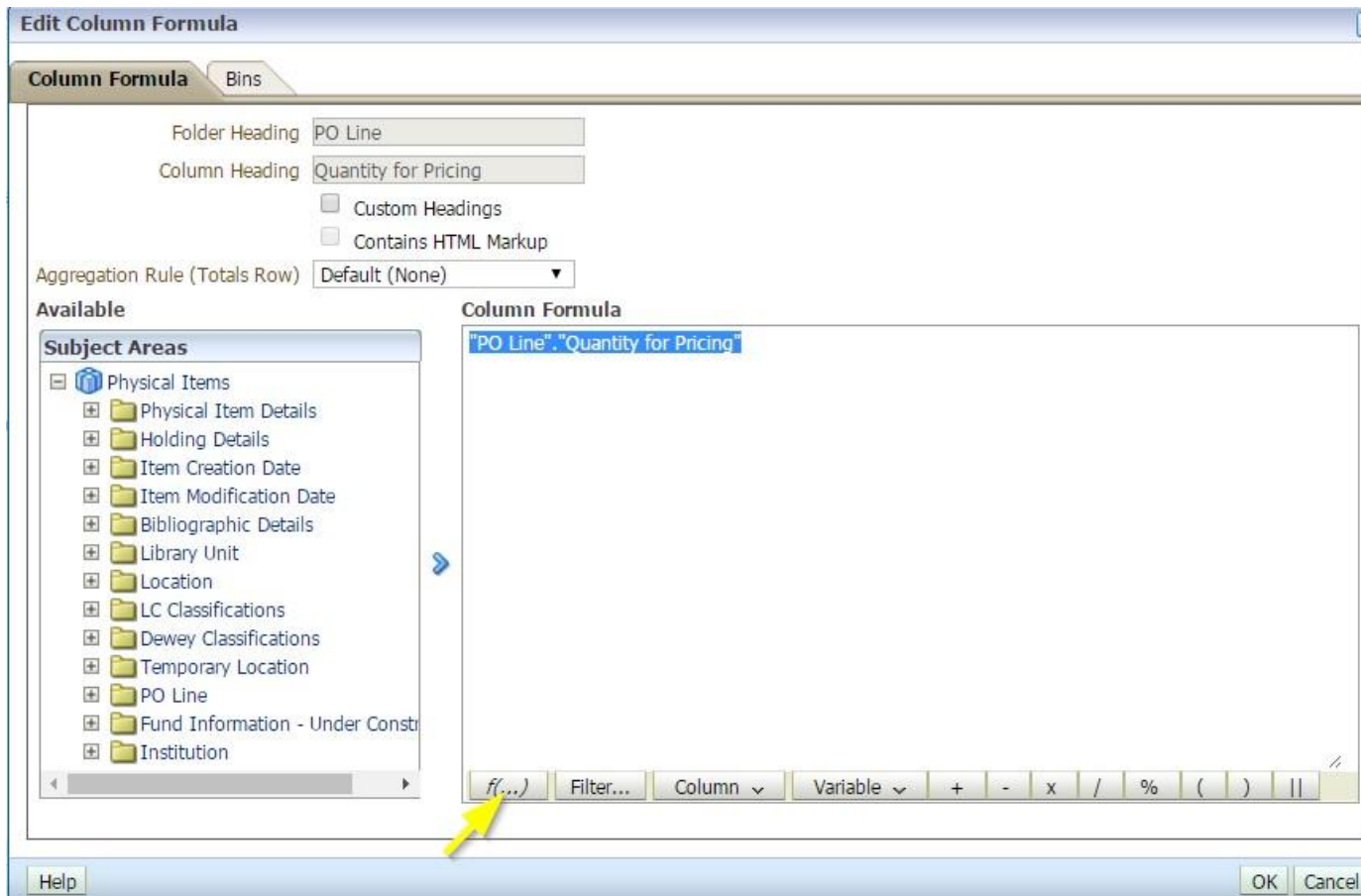
**Filters**

Add filters to the analysis criteria by clicking on Filter opt saved filter by clicking on add button after selecting its name in the catalog pane.

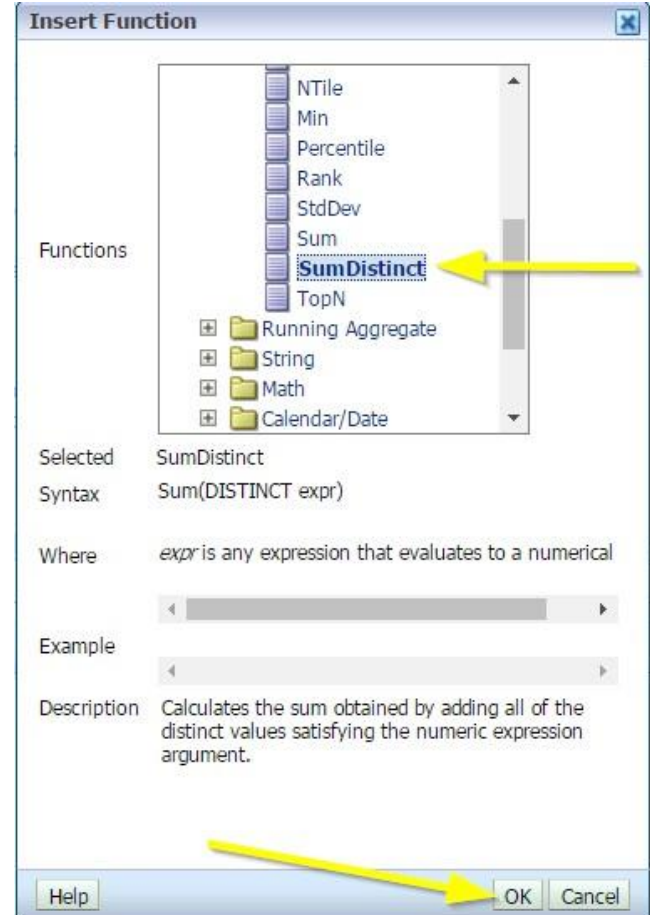
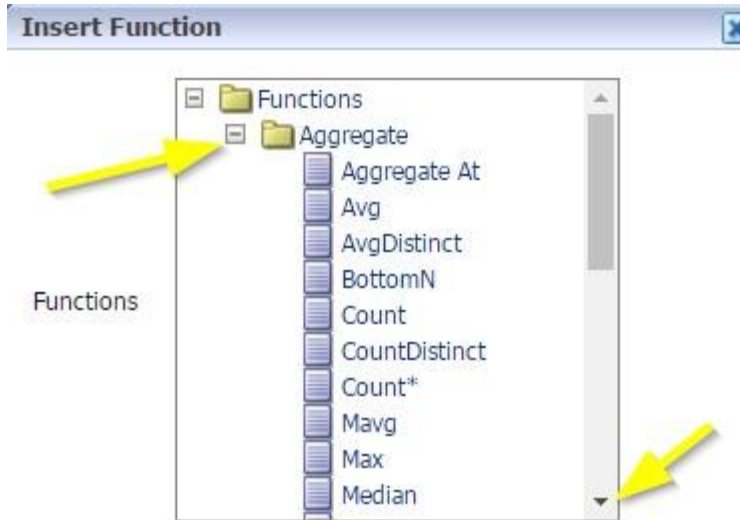
- Sort
- Edit formula**
- Column Properties
- Filter
- Delete

Edit formula

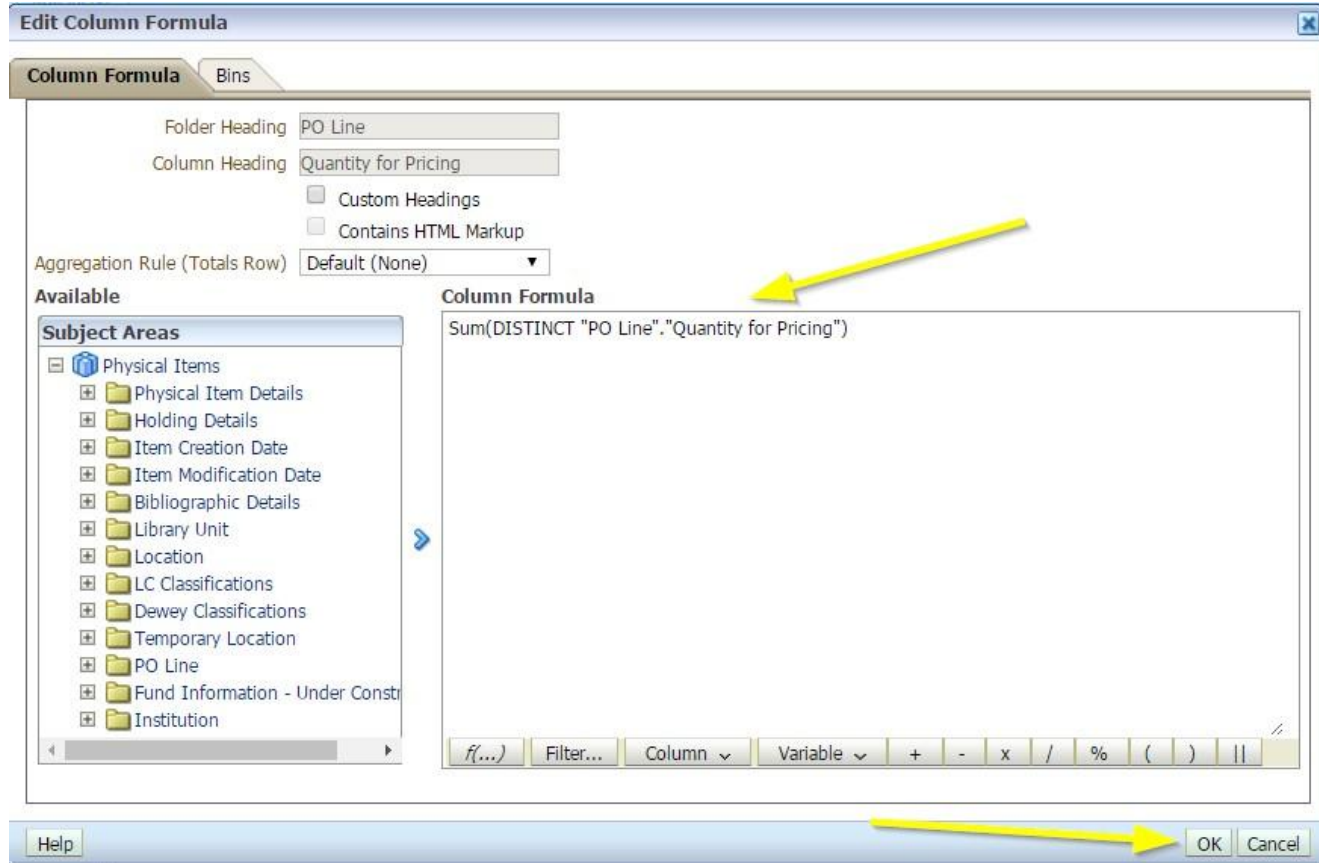
Under Edit formula click  $f(\dots)$  to add a function:



# Go to Functions>Aggregate and select SumDistinct:

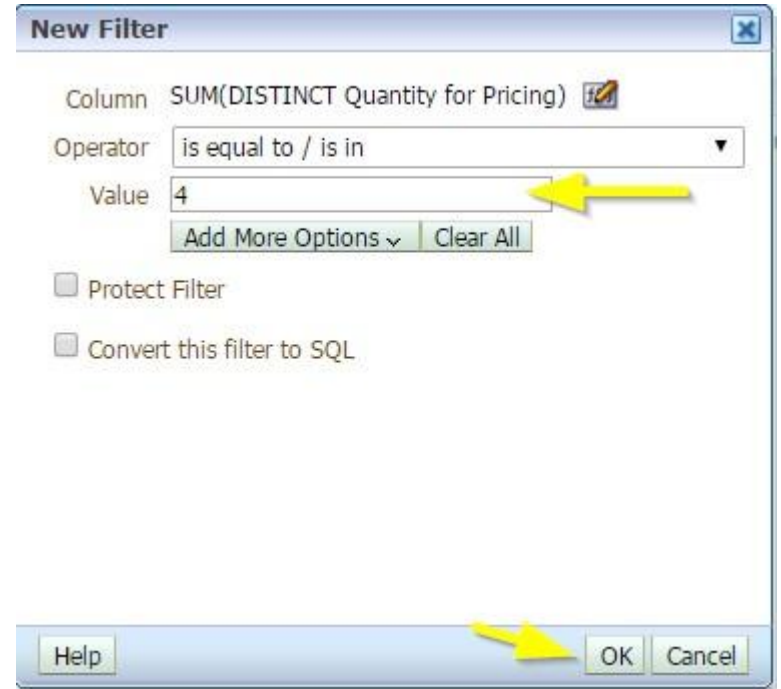
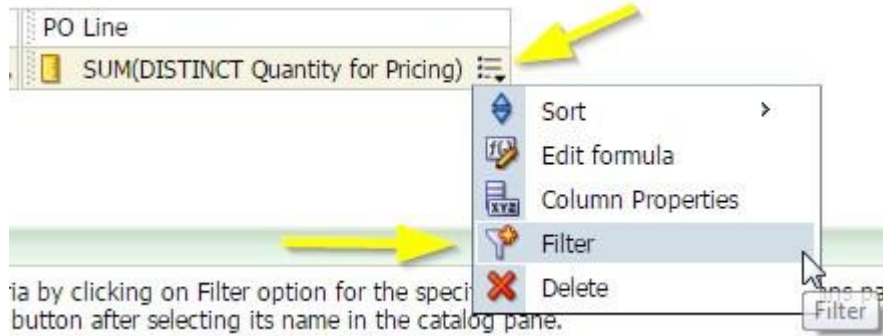


# The formula should look like this now:





Now add the Filter. In this example we are looking for titles with 4 copies on order, so we use the value 4:



Once a filter has been added, you can delete the column from your report if you don't need it to show in the results:

The screenshot displays a report builder interface with three column panes: Bibliographic Details (Title, MMS Id), PO Line (SUM(DISTINCT Quantity for Pricing)), and Physical Item Details (Lifecycle). A context menu is open over the 'SUM(DISTINCT Quantity for Pricing)' column, with the 'Delete' option highlighted. Below the columns is a 'Filters' section with the instruction: 'Add filters to the analysis criteria by clicking on Filter option for the specific column in the Select saved filter by clicking on add button after selecting its name in the catalog pane.' The filter list contains two items: 'SUM(DISTINCT Quantity for Pricing) is equal to / is in 4' and 'AND Lifecycle is not equal to / is not in Deleted'. A yellow arrow points to the 'Delete' option in the menu, and another yellow arrow points to the 'Deleted' text in the filter list.

| Bibliographic Details | PO Line                            | Physical Item Details |
|-----------------------|------------------------------------|-----------------------|
| Title                 | SUM(DISTINCT Quantity for Pricing) | Lifecycle             |

**Filters**

Add filters to the analysis criteria by clicking on Filter option for the specific column in the Select saved filter by clicking on add button after selecting its name in the catalog pane.

- SUM(DISTINCT Quantity for Pricing) is equal to / is in 4
- AND Lifecycle is not equal to / is not in Deleted

Deleting a column in Selected Columns will not delete any filters.  
Selected Columns and Filters are two separate sections.

**Selected Columns**

Double click on column names in the Subject Areas pane to add them to the analysis. Once added, drag-and-drop columns to reorder them. Edit a column's properties, formula and filters, apply sorting, or delete by clicking or hovering over the button next to its name.

| Bibliographic Details |       | Physical Item Details |             |              |
|-----------------------|-------|-----------------------|-------------|--------------|
| 1                     | Title | 2                     | Description | Num of Items |

**Filters**

Add filters to the analysis criteria by clicking on Filter option for the specific column in the Selected Columns pane, or by clicking on the filter button in the Filter pane header. Add a saved filter by clicking on add button after selecting its name in the catalog pane.

- MMS Id is equal to any MMS Id in Subscriptions with 4 copies base report
- AND Lifecycle is not equal to / is not in Deleted
- AND "Physical Item Details"."Receiving Date" >= TIMESTAMPADD(SQL\_TSI\_MONT
- AND Num of Items is not equal to / is not in 4
- AND Location Name is equal to / is in Journals/Magazines

**Everything in Selected Columns (in the red box) is data which will be viewable in the results.**

**Everything in Filters (in the green box) are behind-the-scenes instructions. These are not viewable in the results, but they affect what results are shown.**

The results of the first analysis are as so (a list of every title which has 4 copies ordered):

| Title   | MMS Id            | SUM(DISTINCT Quantity for Pricing) |
|---|-------------------|------------------------------------|
| 100% financial literacy success /   | 994911513201848   | 4                                  |
| 3,000 power words and phrases for effective performance reviews : ready-to-use language for successful employee evaluations /   | 994891305301848   | 4                                  |
| 501 grammar and writing questions.  | 994924113501848   | 4                                  |
| 501 math word problems /  | 994892740301848   | 4                                  |
| 60 hikes within 60 miles.   | 994914099201848   | 4                                  |
| A call to action : women, religion, violence, and power /   | 994905360501848   | 4                                  |
| A path appears : transforming lives, creating opportunity /   | 994912602401848   | 4                                  |
| A pocket style manual /   | 994898051301848   | 4                                  |
| Algebra success in 20 minutes a day.  | 994894991301848   | 4                                  |
| Altered genes, twisted truth : how the venture to genetically engineer our food has subverted science, corrupted government, and systematically deceived the public / | 994942113601848   | 4                                  |
| Anne of Green Gables  | 99130543990101848 | 4                                  |
| Art in America.   | 99100172390101848 | 4                                  |
| Attachments /   | 994971785901848   | 4                                  |
| Babette : the many lives, two deaths and double kidnapping of Dr. Ellsworth /   | 994911795001848   | 4                                  |
| Banned : a history of pesticides and the science of toxicology /  | 994911680401848   | 4                                  |
| Barron's children's Spanish-English visual dictionary /   | 994911706701848   | 4                                  |
| Barron's essential words for the TOEFL : test of English as a foreign language /  | 994905350701848   | 4                                  |
| Basic math & pre-algebra for dummies /  | 994894997001848   | 4                                  |
| Basic skills for the GED® test /  | 994952013101848   | 4                                  |

Now create a second analysis and base it off of the MMS Id from the first analysis:

The screenshot displays a software interface for managing library subscriptions. The main window is titled "Subscriptions with 4 copies" and has a navigation bar with "Home", "Catalog", "Favorites", and "Das". Below the navigation bar are tabs for "Criteria", "Results", "Prompts", and "Advanced".

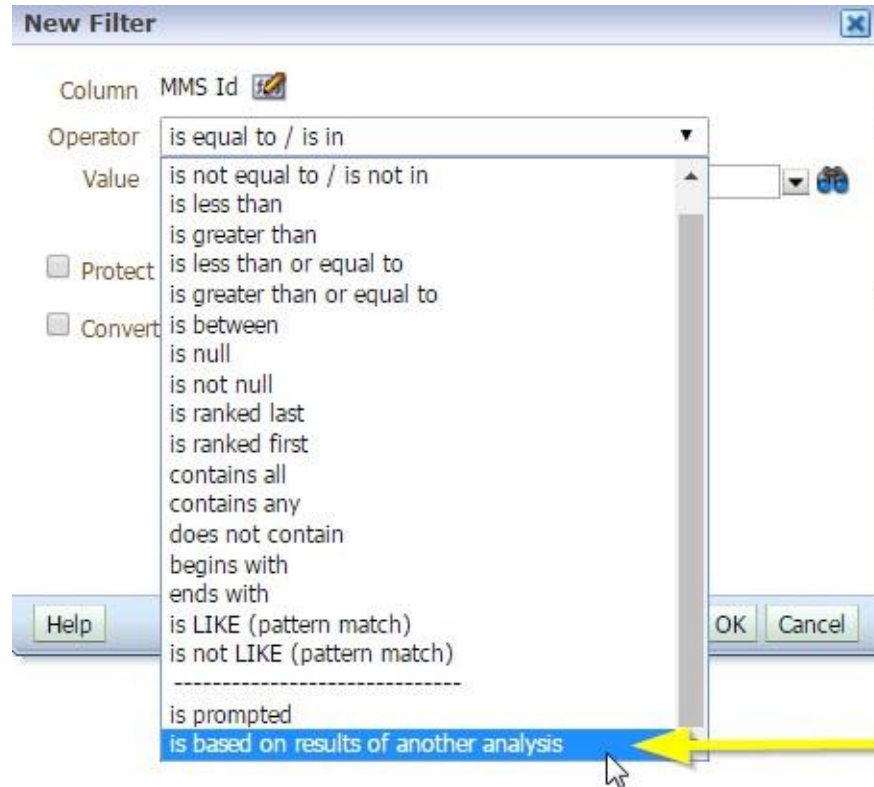
The left pane, titled "Subject Areas", contains a tree view of categories:

- Physical Items
  - Physical Item Details
  - Holding Details
  - Item Creation Date
  - Item Modification Date
  - Bibliographic Details
  - Library Unit
  - Location
  - LC Classifications
  - Dewey Classifications
  - Temporary Location
  - PO Line
  - Fund Information - Under Constr
  - Institution

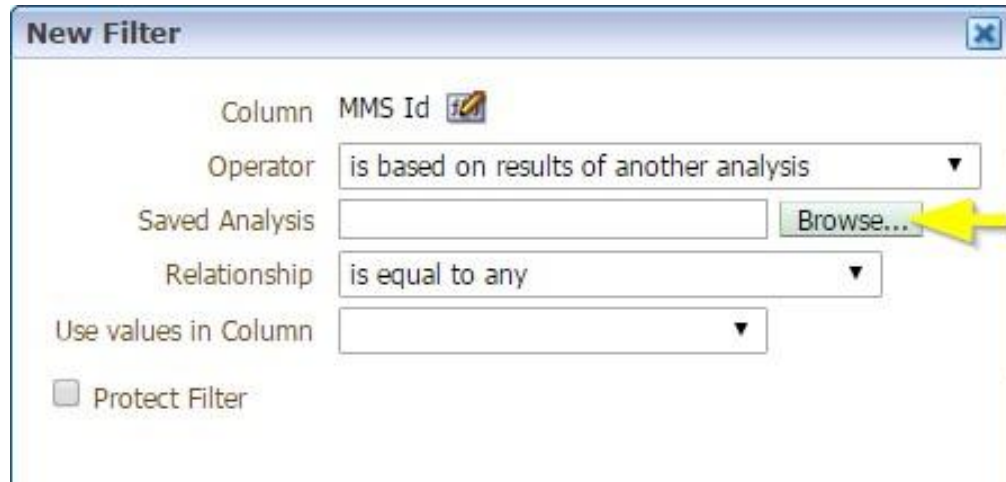
The right pane is divided into three sections:

- Selected Columns:** Contains a list of columns from two subject areas: "Bibliographic Details" (1 Title) and "Physical Item Details" (2 Description, Num of Items). A red box highlights the "MMS Id is equal to any MMS Id in" filter for the "MMS Id" column.
- Filters:** Contains a list of filters for the analysis criteria. The first filter is "MMS Id is equal to any MMS Id in" with a dropdown menu showing "Subscriptions with 4 copies base report".
- AND Filters:** A list of additional filters connected by "AND" operators:
  - Lifecycle is not equal to / is not in Deleted
  - "Physical Item Details"."Receiving Date" >= TIMESTAMPADD(SQL\_TSI\_MONTH, -5, CURRENT\_DATE)
  - Num of Items is not equal to / is not in 4
  - Location Name is equal to / is in Journals/Magazines


To do this, add a filter for the column MMS Id with the operator **is based on results of another analysis**:



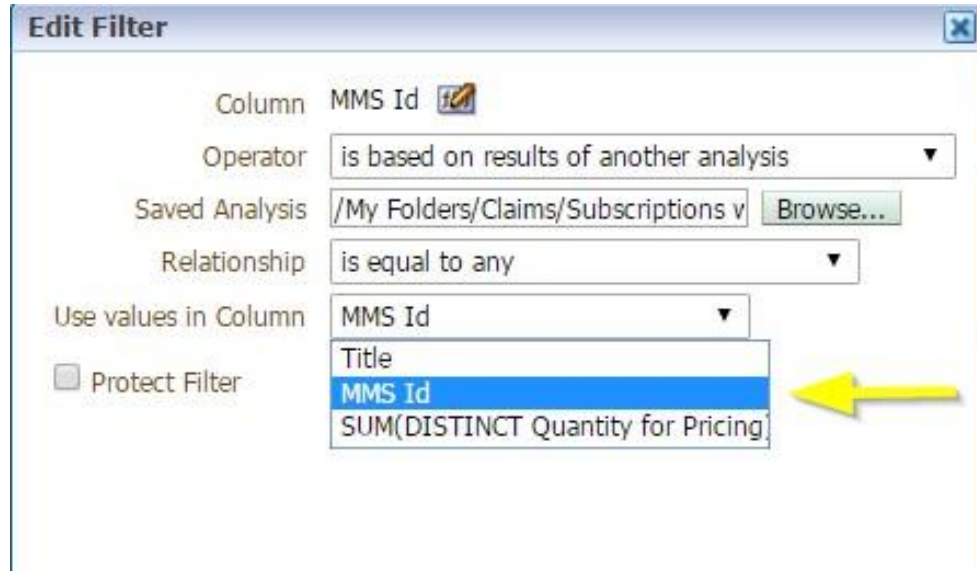
Click Browse and select the first analysis:



The image shows a 'New Filter' dialog box with the following fields and controls:

- Column: MMS Id 
- Operator: is based on results of another analysis
- Saved Analysis:  [Browse...](#) (indicated by a yellow arrow)
- Relationship: is equal to any
- Use values in Column:
- Protect Filter

Choose MMS Id from the **Use values in Column** menu:



The image shows a screenshot of a software dialog box titled "Edit Filter". The dialog box contains several fields and a dropdown menu. The fields are:

- Column: MMS Id (with a small icon)
- Operator: is based on results of another analysis (dropdown)
- Saved Analysis: /My Folders/Claims/Subscriptions v (with a "Browse..." button)
- Relationship: is equal to any (dropdown)
- Use values in Column: MMS Id (dropdown)

The "Use values in Column" dropdown menu is open, showing a list of options: "Title", "MMS Id", and "SUM(DISTINCT Quantity for Pricing)". The "MMS Id" option is highlighted in blue. A yellow arrow points to the "MMS Id" option in the dropdown menu.

Protect Filter



In this analysis we are watching for quantities of less than 4 (ie, not all items have arrived yet)

Subscriptions with 4 copies Home Catalog

Criteria Results Prompts Advanced

Subject Areas

- Physical Items
  - Physical Item Details
    - Num of Items
    - Num of Loans (In House -
    - Num of Loans (In House)
    - Num of Loans (Not In Hou
    - Num of Loans - not sum
    - Alternative Call Number Ty
    - Barcode
    - Base Status
    - Chron I
    - Chron J
    - Chron K
    - Chron L
    - Chron M
    - Creation Date
    - Creator
    - Description
    - Display Alternative Call Nu
    - Display Temporary Call Nu
    - Due Back Date
    - Enum A
    - Enum B
    - Enum C

Selected Columns

Double click on column names in the Subject Areas pane to add them to the analysis. Once ad filters, apply sorting, or delete by clicking or hovering over the button next to its name.

| Bibliographic Details | Physical Item Details | Bibliographic Details |
|-----------------------|-----------------------|-----------------------|
| 1 Title               | 2 Description         | Num of Items          |
|                       |                       | MMS Id                |

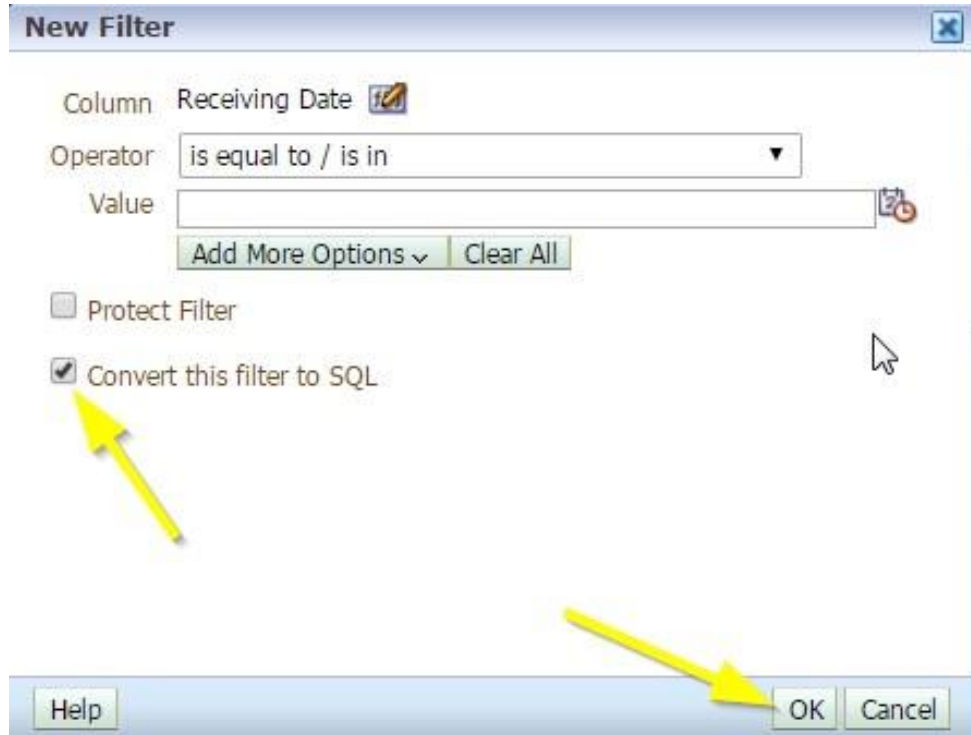
Filters

Add filters to the analysis criteria by clicking on Filter option for the specific column in the Sele saved filter by clicking on add button after selecting its name in the catalog pane.

- MMS Id is equal to any MMS Id in Subscriptions with 4 copies base report
- AND Lifecycle is not equal to / is not in Deleted
- AND "Physical Item Details". "Receiving Date" >= TIMESTAMPADD(SQL\_TSI\_MONTH,
- AND Num of Items is not equal to / is not in 4
- AND Location Name is equal to / is in Journals/Magazines

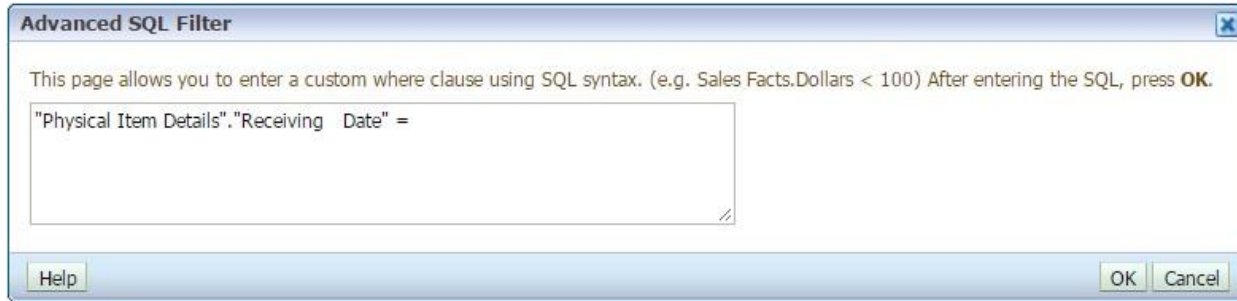
The location has been limited to Journals/Magazines, and a rolling date has been added so it will only show the most recent 5 months of issues.

# HOW TO ADD ROLLING DATE



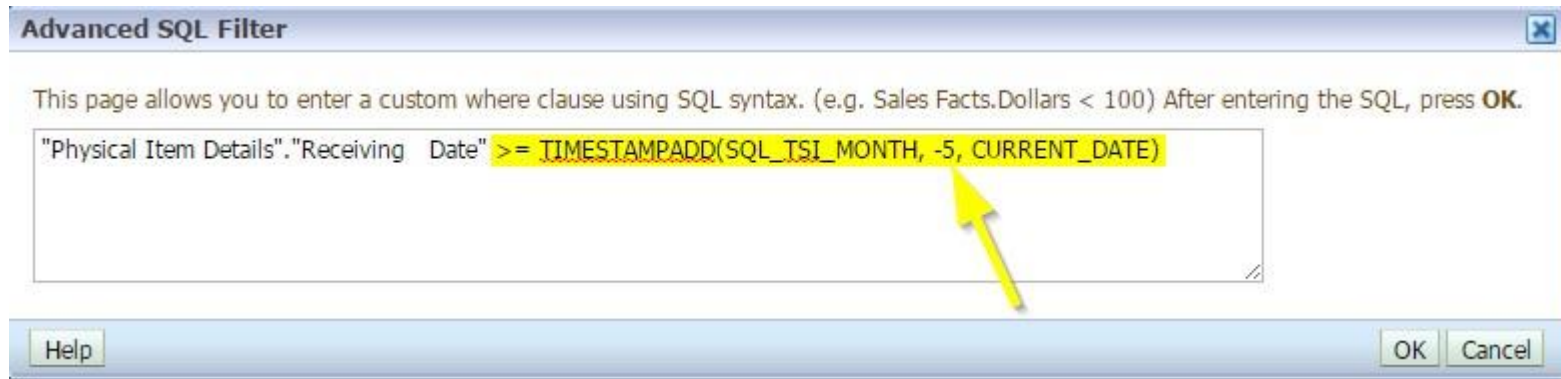
Add a filter and click the box next to Convert this filter to SQL, then click OK.

# This will bring up the Advanced SQL Filter




Add this to the SQL Filter: **>= TIMESTAMPADD(SQL\_TSI\_MONTH, -5, CURRENT\_DATE)**

with **-5** being the number of months back you want the rolling date to start.



The end result is a list of journal/magazine titles with less than 4 items received per issue:

| 4 copy subscriptions  |              |                             |
|---|--------------|-----------------------------|
| Table  |              |                             |
| Title   | Num of Items | Description                 |
| National geographic.  | 1            | v.229:no.6(2016:June)       |
|   | 1            | v.229:no.5(2016:May)        |
|   | 1            | v.229:no.4(2016:Apr.)       |
|   | 1            | v.229:no.3(2016:Mar.)       |
| Science.  | 3            | v.352:no.6285(2016:Apr. 29) |
|   | 3            | v.351:no.6268(2016:Jan. 01) |
| Self.   | 1            | v.38:no.1(2016:Jan./Feb.)   |
| Sports illustrated.   | 1            | v.124:no.7(2016:Feb. 23)    |
|   | 1            | v.124:no.21(2016:June 06)   |
| Sunset.   | 2            | v.236:no.1(2016:Jan.)       |
|   | 1            | v.235:no.6(2015:Dec.)       |
| The New Yorker.   | 3            | v.92:no.6(2016:Mar. 21)     |
|   | 3            | v.92:no.17(2016:June 06/13) |
|   | 1            | v.92:no.17(2016:June 06/13) |

As you can see we have only been getting 1 copy of National Geographic for the past few months (we should be getting 4!).

|                 |   |                             |
|-----------------|---|-----------------------------|
| Sunset.         | 2 | v.236:no.1(2016:Jan.)       |
|                 | 1 | v.235:no.6(2015:Dec.)       |
| The New Yorker. | 3 | v.92:no.6(2016:Mar. 21)     |
|                 | 3 | v.92:no.17(2016:June 06/13) |
|                 | 1 | v.92:no.17(2016:June 06/13) |

Note the last two entries for The New Yorker. These are “counted” separately, even though their descriptions in Analytics look exactly the same. Looking at these item records in Alma, one item description has an extra space between June and 06/13:

v.92:no.17(2016:June 06/13) [description copied from one item record in Alma]

v.92:no.17(2016:June 06/13) [description of other three item records in Alma]

So they are counted as distinct entities by analytics (though confusingly displayed without the extra space).