**Filter by using advanced criteria**

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|  |
| --- |
| *Try Office 2010*In Excel 2010, search capability has been added to the AutoFilter. [Read a blog post](http://office.microsoft.com/en-us/excel-help/redir/XT102029574.aspx?CTT=5&origin=HP005200178) or [try Office 2010!](http://office.microsoft.com/en-us/excel-help/redir/XT102029220.aspx?CTT=5&origin=HP005200178) |

The **Advanced Filter** command on the **Data** menu lets you use complex [criteria](javascript:AppendPopup(this,'466770253_1')) to filter a range, but it works differently from the **AutoFilter** command in several important ways.

* It displays the **Advanced Filter** dialog box instead of the **Custom AutoFilter** dialog box.
* You do not type the complex criteria in the **Advanced Filter** dialog box as you do in the **Custom AutoFilter** dialog box. Rather, you type the complex criteria in a criteria range on the worksheet and above the range you want to filter. Excel uses the separate criteria range in the **Advanced Filter** dialog box as the source for the complex criteria.
* Although you can filter a range in place, like the **AutoFilter** command, the **Advanced Filter** command does not display drop-down lists for the columns.

1. Insert at least three blank rows above the range that can be used as a criteria range. The criteria range must have column labels. Make sure there is at least one blank row between the criteria values and the range.

**Example criteria range and data range for the criteria examples in step 2**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **A** | **B** | **C** |
| **1** | **Type** | **Salesperson** | **Sales** |
| **2** |  |  |  |
| **3** |  |  |  |
| **4** |  |  |  |
| **5** |  |  |  |
| **6** | **Type** | **Salesperson** | **Sales** |
| **7** | Beverages | Suyama | $5122 |
| **8** | Meat | Davolio | $450 |
| **9** | produce | Buchanan | $6328 |
| **10** | Produce | Davolio | $6544 |

1. In the rows below the column labels, type the criteria you want to match.

**Criteria examples**

**Important**

* Because the equal sign is used to indicate a formula when you type text or a value in a cell, Microsoft Excel evaluates what you type; however, this may cause unexpected filter results. To indicate an equality comparison operator for either text or a value, type the criteria as a string expression in the appropriate cell in the criteria range:

**=''=***entry***''**

Where *entry*is the text or value you want to find. For example:

|  |  |
| --- | --- |
| **What you type in the cell** | **What Excel evaluates and displays** |
| ="=Davolio" | =Davolio |
| ="=3000" | =3000 |

* When filtering text data, Excel does not distinguish between uppercase and lowercase characters. However, you can use a formula to perform a case-sensitive search. For an example, see [Filtering for text by using a case-sensitive search](http://office.microsoft.com/en-us/excel-help/filter-by-using-advanced-criteria-HP005200178.aspx#BMcasesensitive).

The following sections provide examples of complex criteria.

* [Multiple criteria in one column](http://office.microsoft.com/en-us/excel-help/filter-by-using-advanced-criteria-HP005200178.aspx#BMexample1)
* [Multiple criteria in multiple columns where all criteria must be true](http://office.microsoft.com/en-us/excel-help/filter-by-using-advanced-criteria-HP005200178.aspx#BMexample2)
* [Multiple criteria in multiple columns where any criteria can be true](http://office.microsoft.com/en-us/excel-help/filter-by-using-advanced-criteria-HP005200178.aspx#BMexample3)
* [Multiple sets of criteria where each set includes criteria for multiple columns](http://office.microsoft.com/en-us/excel-help/filter-by-using-advanced-criteria-HP005200178.aspx#BMexample4)
* [Multiple sets of criteria where each set includes criteria for one column](http://office.microsoft.com/en-us/excel-help/filter-by-using-advanced-criteria-HP005200178.aspx#BMexample5)
* [Criteria to find text values that share some characters but not others](http://office.microsoft.com/en-us/excel-help/filter-by-using-advanced-criteria-HP005200178.aspx#BMexample7)
* [Criteria created as the result of a formula](http://office.microsoft.com/en-us/excel-help/filter-by-using-advanced-criteria-HP005200178.aspx#BMexample6)
  + [Filtering for values greater than the average of all values in the data range](http://office.microsoft.com/en-us/excel-help/filter-by-using-advanced-criteria-HP005200178.aspx#BMvaluesgreateraverage)
  + [Filtering for text by using a case-sensitive search](http://office.microsoft.com/en-us/excel-help/filter-by-using-advanced-criteria-HP005200178.aspx#BMcasesensitive)

**Multiple criteria in one column**

**Boolean logic:**     (Salesperson = "Davolio" OR Salesperson = "Buchanan")

To find rows that meet multiple criteria for one column, type the criteria directly below each other in separate rows of the criteria range.

In the following data range (A6:C10), the criteria range (B1:B3) displays the rows that contain either "Davolio" or "Buchanan" in the Salesperson column (A8:C10).

|  |  |  |  |
| --- | --- | --- | --- |
|  | **A** | **B** | **C** |
| **1** | **Type** | **Salesperson** | **Sales** |
| **2** |  | =Davolio |  |
| **3** |  | =Buchanan |  |
| **4** |  |  |  |
| **5** |  |  |  |
| **6** | **Type** | **Salesperson** | **Sales** |
| **7** | Beverages | Suyama | $5122 |
| **8** | **Meat** | **Davolio** | **$450** |
| **9** | **produce** | **Buchanan** | **$6328** |
| **10** | **Produce** | **Davolio** | **$6544** |

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**Multiple criteria in multiple columns where all criteria must be true**

**Boolean logic:**     (Type = "Produce" AND Sales > 1000)

To find rows that meet multiple criteria in multiple columns, type all of the criteria in the same row of the criteria range.

In the following data range (A6:C10), the criteria range (A1:C2) displays all rows that contain "Produce" in the Type column and a value greater than $1,000 in the Sales column (A9:C10).

|  |  |  |  |
| --- | --- | --- | --- |
|  | **A** | **B** | **C** |
| **1** | **Type** | **Salesperson** | **Sales** |
| **2** | =Produce |  | >1000 |
| **3** |  |  |  |
| **4** |  |  |  |
| **5** |  |  |  |
| **6** | **Type** | **Salesperson** | **Sales** |
| **7** | Beverages | Suyama | $5122 |
| **8** | Meat | Davolio | $450 |
| **9** | **produce** | **Buchanan** | **$6328** |
| **10** | **Produce** | **Davolio** | **$6544** |

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**Multiple criteria in multiple columns where any criteria can be true**

**Boolean logic:**     (Type = "Produce" OR Salesperson = "Davolio")

To find rows that meet multiple criteria in multiple columns, where any criteria can be true, type the criteria in different rows of the criteria range.

In the following data range (A6:C10), the criteria range (A1:B3) displays all rows that contain "Produce" in the Type column or "Davolio" in the Salesperson column (A8:C10).

|  |  |  |  |
| --- | --- | --- | --- |
|  | **A** | **B** | **C** |
| **1** | **Type** | **Salesperson** | **Sales** |
| **2** | =Produce |  |  |
| **3** |  | =Davolio |  |
| **4** |  |  |  |
| **5** |  |  |  |
| **6** | **Type** | **Salesperson** | **Sales** |
| **7** | Beverages | Suyama | $5122 |
| **8** | **Meat** | **Davolio** | **$450** |
| **9** | **produce** | **Buchanan** | **$6328** |
| **10** | **Produce** | **Davolio** | **$6544** |

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**Multiple sets of criteria where each set includes criteria for multiple columns**

**Boolean logic:**     ( (Salesperson = "Davolio" AND Sales >3000) OR (Salesperson = "Buchanan" AND Sales > 1500) )

To find rows that meet multiple sets of criteria, where each set includes criteria for multiple columns, type each set of criteria in separate rows.

In the following data range (A6:C10), the criteria range (B1:C3) displays the rows that contain both "Davolio" in the Salesperson column and a value greater than $3,000 in the Sales column, or displays the rows that contain "Buchanan" in the Salesperson and a value greater than $1,500 in the Sales column (A9:C10).

|  |  |  |  |
| --- | --- | --- | --- |
|  | **A** | **B** | **C** |
| **1** | **Type** | **Salesperson** | **Sales** |
| **2** |  | =Davolio | >3000 |
| **3** |  | =Buchanan | >1500 |
| **4** |  |  |  |
| **5** |  |  |  |
| **6** | **Type** | **Salesperson** | **Sales** |
| **7** | Beverages | Suyama | $5122 |
| **8** | Meat | Davolio | $450 |
| **9** | **produce** | **Buchanan** | **$6328** |
| **10** | **Produce** | **Davolio** | **$6544** |

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**Multiple sets of criteria where each set includes criteria for one column**

**Boolean logic:**     ( (Sales > 6000 AND Sales < 6500 ) OR (Sales < 500) )

To find rows that meet multiple sets of criteria, where each set includes criteria for one column, include multiple columns with the same column heading.

In the following data range (A6:C10), the criteria range (C1:D3) displays rows that contain values between 5,000 and 8,000 and values less than 500 in the Sales column (A8:C10).

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **A** | **B** | **C** | **D** |
| **1** | **Type** | **Salesperson** | **Sales** | **Sales** |
| **2** |  |  | >6000 | <6500 |
| **3** |  |  | <500 |  |
| **4** |  |  |  |  |
| **5** |  |  |  |  |
| **6** | **Type** | **Salesperson** | **Sales** |  |
| **7** | Beverages | Suyama | $5122 |  |
| **8** | **Meat** | **Davolio** | **$450** |  |
| **9** | **produce** | **Buchanan** | **$6328** |  |
| **10** | Produce | Davolio | $6544 |  |

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**Criteria to find text values that share some characters but not others**

To find text values that share some characters but not others, do one or more of the following:

* Type one or more characters without an equal sign (=) to find rows with a text value in a column that begin with those characters. For example, if you type the text **Dav** as a criterion, Excel finds "Davolio," "David," and "Davis."
* Use a wildcard character.

**How?**

The following wildcard characters can be used as comparison criteria.

|  |  |
| --- | --- |
| **Use** | **To find** |
| ? (question mark) | Any single character For example, sm?th finds "smith" and "smyth" |
| \* (asterisk) | Any number of characters For example, \*east finds "Northeast" and "Southeast" |
| ~ (tilde) followed by ?, \*, or ~ | A question mark, asterisk, or tilde For example, fy91~? finds "fy91?" |

In the following data range (A6:C10), the criteria range (A1:B3) displays rows with "Me" as the first characters in the Type column or rows with the second character equal to "u" in the Salesperson column (A7:C9).

|  |  |  |  |
| --- | --- | --- | --- |
|  | **A** | **B** | **C** |
| **1** | **Type** | **Salesperson** | **Sales** |
| **2** | Me |  |  |
| **3** |  | =?u\* |  |
| **4** |  |  |  |
| **5** |  |  |  |
| **6** | **Type** | **Salesperson** | **Sales** |
| **7** | **Beverages** | **Suyama** | **$5122** |
| **8** | **Meat** | **Davolio** | **$450** |
| **9** | **produce** | **Buchanan** | **$6328** |
| **10** | Produce | Davolio | $6544 |

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**Criteria created as the result of a formula**

You can use a calculated value that is the result of a [formula](javascript:AppendPopup(this,'165860606_2')) as your criterion. Remember the following important points:

* The formula must evaluate to TRUE or FALSE.
* Because you are using a formula, enter the formula as you normally would, and do not type the expression in the following way:

**=''=***entry***''**

* Do not use a column label for criteria labels; either keep the criteria labels blank or use a label that is not a column label in the range (in the examples below, Calculated Average and Exact Match).

If you use a column label in the formula instead of a relative cell reference or a range name, Excel displays an error value such as #NAME? or #VALUE! in the cell that contains the criterion. You can ignore this error because it does not affect how the range is filtered.

* The formula that you use for criteria must use a [relative reference](javascript:AppendPopup(this,'625624654_3')) to refer to the corresponding cell in the first row (in the examples below, C7 and A7).
* All other references in the formula must be [absolute references](javascript:AppendPopup(this,'707275071_4')).

The following subsections provide specific examples of criteria created as the result of a formula.

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**Filtering for values greater than the average of all values in the data range**

In the following data range (A6:D10), the criteria range (D1:D2) displays rows that have a value in the Sales column greater than the average of all the Sales values (C7:C10). In the formula, "C7" refers to the filtered column (C) of the first row of the data range (7).

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **A** | **B** | **C** | **D** |
| **1** | **Type** | **Salesperson** | **Sales** | **Calculated Average** |
| **2** |  |  |  | =C7>AVERAGE($C$7:$C$10) |
| **3** |  |  |  |  |
| **4** |  |  |  |  |
| **5** |  |  |  |  |
| **6** | **Type** | **Salesperson** | **Sales** |  |
| **7** | **Beverages** | **Suyama** | **$5122** |  |
| **8** | Meat | Davolio | $450 |  |
| **9** | **produce** | **Buchanan** | **$6328** |  |
| **10** | **Produce** | **Davolio** | **$6544** |  |

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**Filtering for text by using a case-sensitive search**

In the data range (A6:D10), the criteria range (D1:D2) displays rows that contain "Produce" in the Type column by using the EXACT function to perform a case-sensitive search (A10:C10). In the formula, "A7" refers to the filtered column (A) of the first row of the data range (7).

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **A** | **B** | **C** | **D** |
| **1** | **Type** | **Salesperson** | **Sales** | **Exact Match** |
| **2** |  |  |  | =EXACT(A7, "Produce") |
| **3** |  |  |  |  |
| **4** |  |  |  |  |
| **5** |  |  |  |  |
| **6** | **Type** | **Salesperson** | **Sales** |  |
| **7** | Beverages | Suyama | $5122 |  |
| **8** | Meat | Davolio | $450 |  |
| **9** | produce | Buchanan | $6328 |  |
| **10** | **Produce** | **Davolio** | **$6544** |  |

1. Click a cell in the range.
2. On the **Data** menu, point to **Filter**, and then click **Advanced Filter**.
3. To filter the range by hiding rows that don't match your criteria, click **Filter the list, in-place**.

To filter the range by copying rows that match your criteria to another area of the worksheet, click **Copy to another location**, click in the **Copy to** box, and then click the upper-left corner of the area where you want to paste the rows.

1. In the **Criteria range** box, enter the reference for the criteria range, including the criteria labels.

To move the **Advanced Filter** dialog box out of the way temporarily while you select the criteria range, click **Collapse Dialog** Button image.

1. To change how the data is filtered, change the values in the criteria range and filter the data again.

**Notes**

* You can name a range **Criteria**, and the reference for the range will appear automatically in the **Criteria range** box. You can also define the name **Database** for the range of data to be filtered and define the name **Extract** for the area where you want to paste the rows, and these ranges will appear automatically in the **List range** and **Copy to** boxes, respectively.
* When you copy filtered rows to another location, you can specify which columns to include in the copy. Before filtering, copy the column labels for the columns you want to the first row of the area where you plan to paste the filtered rows. When you filter, enter a reference to the copied column labels in the **Copy to** box. The copied rows will then include only the columns for which you copied the labels.