Count occurrences of values or unique values in a data range

Let’s say you want to find out how many unique values exist in a range that contains duplicate values. For example, if a column contains:

- The values 5, 6, 7, and 6, then the result is three unique values—5, 6 and 7.
- The values “Buchanan”, “Dodsworth”, “Dodsworth”, “Dodsworth”, then the result is two unique values—“Buchanan” and “Dodsworth”.

There are several ways to count unique values among duplicates.

What do you want to do?

Count the number of unique values by using a filter

Count the number of unique values by using functions

Count the number of unique values by using a filter

You can use the Advanced Filter to extract the unique values from a column of data and paste them to a new location. Then you can use the ROWS function to count the number of items in the new range.

1. Ensure that the first row in the column has a column header.
2. On the Data menu, point to Filter, and then click Advanced Filter.
3. In the Advanced Filter dialog box, click Copy to another location.
4. If the range that you are counting is not already selected, delete any information in the List range box and then click the column (or select the range) that contains your data.
5. In the Copy to box, delete any information in the box or click in the box, and then click a blank column where you want to copy the unique values.
6. Select the Unique records only check box, and click OK.

The unique values from the selected range are copied to the new column.

7. In the blank cell below the last cell in the range, enter the ROWS function. Use the range of unique values that you just copied as the argument. For example, if the range of unique values is B1:B45, then enter:

`=ROWS(B1:B45)`

Count the number of unique values by using functions

Use the IF, SUM< FREQUENCY, MATCH, and LEN functions to do this task:

- Assign a value of 1 to each true condition by using the IF function.
- Add the total by using the SUM function.
- Count the number of unique values by using the FREQUENCY function. The FREQUENCY function ignores text and zero values. For the first occurrence of a specific value, this function returns a number equal to the number of occurrences of that value. For each occurrence of that same value after the first, this function returns a zero.
- Return the position of a text value in a range by using the MATCH function. This value returned is then used as an argument to the FREQUENCY function so that the corresponding text values can be evaluated.
- Find blank cells by using the LEN function. Blank cells have a length of 0.

Example

The example may be easier to understand if you copy it to a blank worksheet.

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Data</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>986</td>
<td>Buchanan</td>
</tr>
<tr>
<td>3</td>
<td>Dodsworth</td>
<td>563</td>
</tr>
</tbody>
</table>
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### Formula

<table>
<thead>
<tr>
<th>Formula</th>
<th>Description (Result)</th>
</tr>
</thead>
<tbody>
<tr>
<td>=SUM(IF(FREQUENCY(A2:A10,A2:A10)&gt;0,1))</td>
<td>Count the number of unique number values in cells A2:A10, but do not count blank cells or text values (4)</td>
</tr>
</tbody>
</table>

### Function details

- **FREQUENCY**
- **MATCH**
- **LEN, LENB**
- **SUM**
- **IF**

### NOTES

- The formulas in this example must be entered as **array formulas**. Select each cell that contains a formula, press F2, and then press CTRL+SHIFT+ENTER.

- To see a function evaluated step by step, select the cell containing the formula. Then, on the **Tools** menu, point to **Formula Auditing** and click **Evaluate Formula**.