

Access 2010

Tables: How to Create Calculated Fields and Totals Rows



How to create calculated fields and totals rows in tables

Calculated fields and **totals rows** let you perform calculations with the data in your tables. Calculated fields perform calculations using data within one record, while totals rows perform a calculation on an entire field of data.

Calculated fields

When you create a **calculated field**, you are adding a new field in which every row contains a calculation involving other numerical fields in this row. To do this, you must enter a mathematical **expression**, which is made up of **field names in your table** and **mathematical symbols**. You don't need to know too much about math or expression-building to create a useful calculated field. In fact, you can write robust expressions using only grade-school math. For instance, you could:

- Use **+** to find the **sum** of the contents of two fields or to add a constant value (such as **+2** or **+5**) to a field
- Use ***** to **multiply** the contents of two fields, or to multiply fields by a constant value
- Use **-** to **subtract** one field from other, or to subtract a constant value from a field

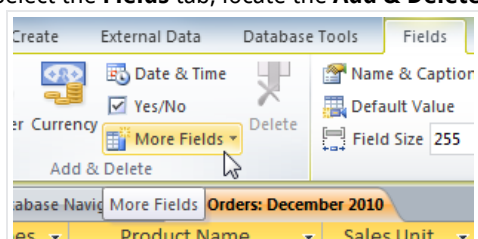
In our example, we'll use a table containing a month's worth of orders. The table contains items listed by **sales unit**—single, half-dozen, and dozen. One column lets us know the **number sold** of each sales unit. Another lets us know the actual **numerical value** of each of these units. For instance, in the top row you can see that **seven dozen** fudge brownies have been sold, and that a dozen equals **12** brownies.

Product Types	Product Name	Sales Unit	Value of Sales Unit	# of Sales Unit Sold
Cookies	Fudge Brownie	One Dozen	12	7

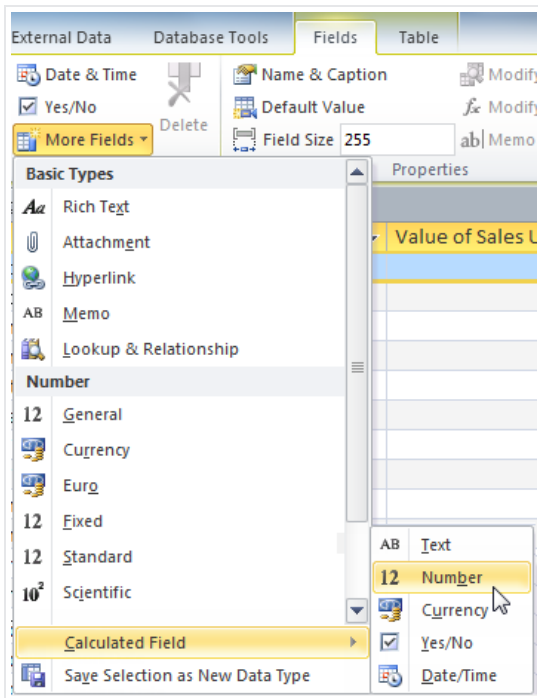
To find the **total number** of brownies that have been sold, we'd have to multiply the number of units sold by the numerical value of that unit—here, 7×12 , which equals 84. That was a simple problem, but making that calculation for each row of the table would be tedious and time consuming. Instead, we can create a calculated field that shows the product of these two fields multiplied together on each row.

To create a calculated field:

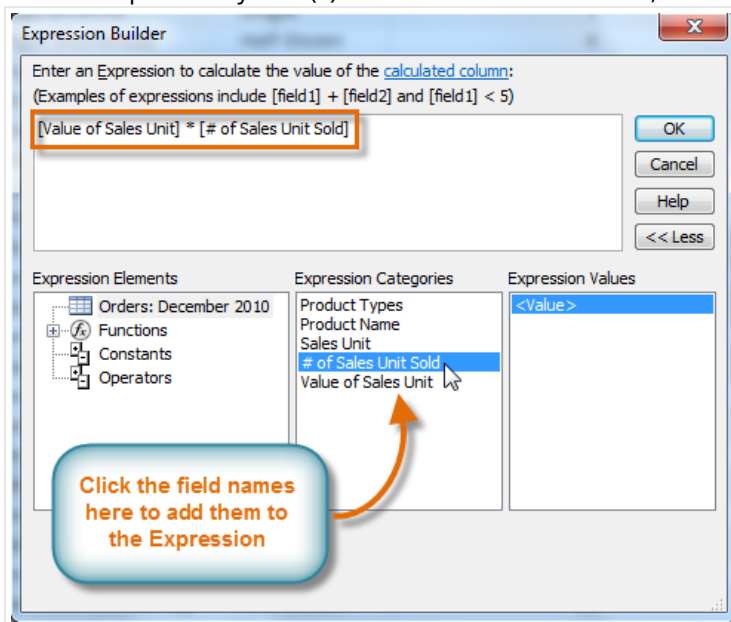
1. Select the **Fields** tab, locate the **Add & Delete** group, and click the **More Fields** drop-down command.



2. Hover your mouse over **Calculated Field**, and select the desired data type. We want our calculation to be a number, so we'll select **Number**.



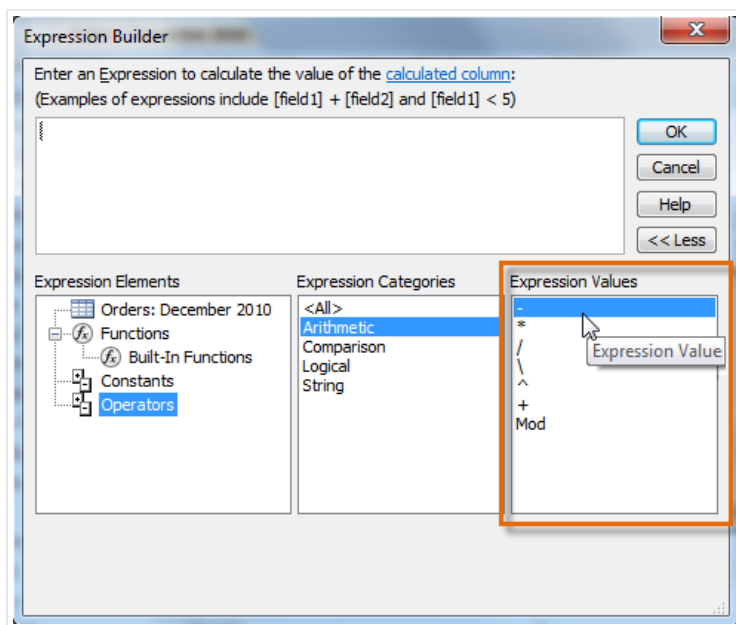
3. Build your expression. To select fields to include in your expression, double-click the field name in the **Expression Categories** box. Remember to include mathematical operators like + or -. Because we want to **multiply** our two field, we put the multiplication symbol (*) between the two field names, which we selected from the **Expression Categories** box.



4. Click **OK**. The calculated field will be added to your table. If desired, you can now sort or filter it like any other field.

Value of Sales Unit ▾	# of Sales Unit Sold ▾	Actual # Sold ▾
12	7	84
1	6	6
1	2	2
12	5	60
6	1	6
1	4	4
1	4	4
1	4	4
12	3	36
1	1	1
12	1	12
12	1	12

For more examples of mathematical expressions that can be used to create calculated fields, review the **Arithmetic Expressions** in the **Expression Builder** dialog box.



Totals rows

The totals row lets you add up an entire column of numbers, just like in a ledger or on a receipt. The resulting sum appears in a special row at the bottom of your table.

For our example, we'll add a **totals row** to our calculated field. This will let us know the total number of items sold.

To create a totals row:

1. Select the **Home** tab, then locate the **Data** group.
2. Click the **Totals** command.

Sales Unit	# of Sales Unit Sold	Actual # Sold
1	1	
12	6	
1	3	

3. **Scroll** down to the **last row** of your table.
4. Locate the field you want to create a totals row for, then select the **second empty cell below it**. When a **drop-down arrow** appears, **click** it.

Product Name	Sales Unit	Value of Sales Unit	# of Sales Unit Sold	Actual # Sold
Mini Cheesecake, Plain	One Dozen	12	1	12
Raspberry Chocolate Tartlet	One Dozen	12	3	36
Tiramisu	One Dozen	12	10	120
Apple	Single	1	5	5
Apple Crumb	Single	1	3	3
Chocolate Chess	Single	1	5	5
Coconut Cream	Single	1	1	1
French Silk	Single	1	5	5
Key Lime	Single	1	4	4
Peanut Butter Chocolate	Single	1	3	3
Pecan	Single	1	10	10
Pumpkin	Single	1	9	9
Sweet Potato	Single	1	3	3
*				

5. Select the function you would like to be performed on the field data.

Sales Unit	# of Sales Unit Sold	Actual # Sold
1	4	4
1	3	3
1	10	10
1	9	9
1	3	3

6. Your field total will appear.

Employee Database Navigation		Orders: December 2010			
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Mini Cheesecake, Plain	One Dozen	12	1	12	
Raspberry Chocolate Tartlett	One Dozen	12	3	36	
Tiramisu	One Dozen	12	10	120	
Apple	Single	1	5	5	
Apple Crumb	Single	1	3	3	
Chocolate Chess	Single	1	5	5	
Coconut Cream	Single	1	1	1	
French Silk	Single	1	5	5	
Key Lime	Single	1	4	4	
Peanut Butter Chocolate	Single	1	3	3	
Pecan	Single	1	10	10	
Pumpkin	Single	1	9	9	
Sweet Potato	Single	1	3	3	
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