Using the Field Calculator

ISTC Topic: 2.3

In this Chapter you will learn

- How to use the Field Calculator to populate selected tool
- How to set up calculations with the Field Calculator Tool

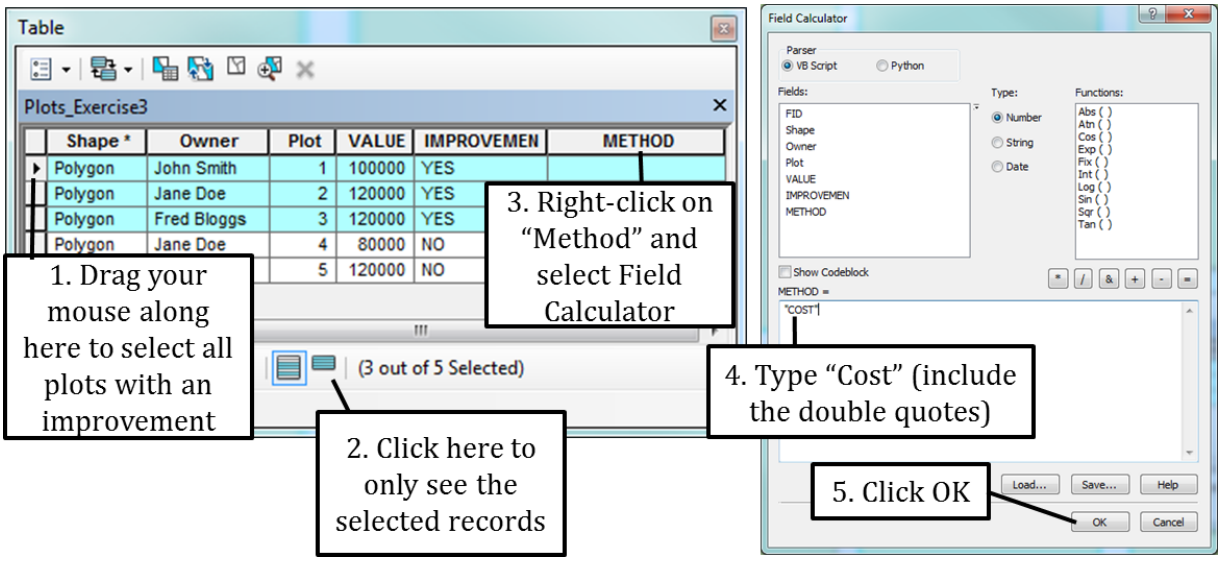
1. Using the Field Calculator

Exercise 1: Adding a field and using a selection to populate this field

VIDEO

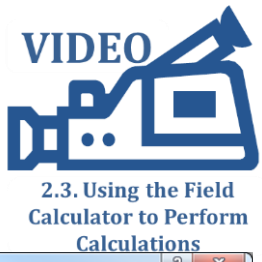
2.3. Using the Field Calculator on Selected Fields

1. Open a new map document in ArcMap and add the Plots_Exercise3 shapefile.
2. Open the attribute table for the Plots_Exercise3 shapefile and add a field called METHOD. Set data type to text and the Length to 15.
3. The value of the METHOD field depends on the value in the IMPROVEMENT field. If there is a "YES" in the IMPROVEMENT field, then the METHOD should be set to "COST". All other records should have their METHOD set to "MARKET"
4. Use the instructions below to use the field calculator to populate the METHOD for all the plots with an improvement.



5. Repeat the steps above for the plots without an improvement. In the Field Calculator set the METHOD to "MARKET". Notice that you do not need to save your edits, since you never started an editing session. The drawback of this method is that you cannot undo mistakes before saving them.

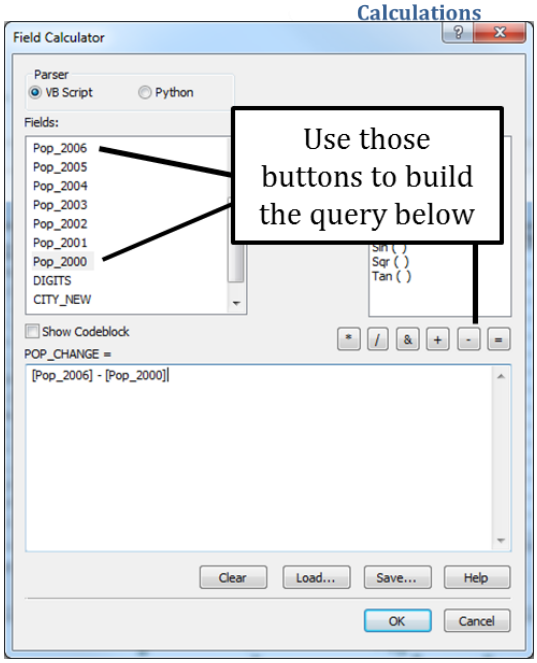
Exercise 2: Using the field calculator to compute population growth



2.3. Using the Field Calculator to Perform Calculations

1. Open a new map document in ArcMap and add the Cities shapefile. Open the attribute table and notice it contains the population size for each city from 2000 until 2006. In this exercise we first compute how the population changed from the year 2000 until 2006 and then convert this change into a percentage.
2. Add a new field called "POP_CHANGE". Set the data type to short integer with a precision of 10.
3. Right-click on this new POP_CHANGE field and select Field Calculator. Populate the calculator as shown on the right to build a query that reads:

   POP_CHANGE = [Pop_2006] – [Pop_2000]



4. Click OK.
5. Add a new field called "PERC_CHNG". Set the data type to Double, Precision to 5 and Scale to 2.
6. Right-click on PERC_CHNG and open the Field Calculator. Build the following query:

   PERC_CHNG = ([POP_CHANGE] / [Pop_2000]) * 100

7. Click OK. The new field now contains the % increase or decrease in population size between 2000 and 2006.
8. Use the sort function to answer the following questions (based on % increase or decrease)
   a. Which city saw the largest growth?
   b. Which city shrunk the most?