

Using Field Calculator: Create Random Values

Welcome to the Essential ArcGIS Task Sheet Series. This series supplements the Iowa State University GIS Geospatial Technology Training Program short course series, "Essential ArcGIS Tutorial Series." These task sheets are designed to provide quick, easy instructions for performing specific tasks in GIS.

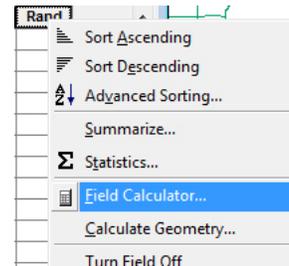
Random values may be needed in analyzing specific scenarios. ArcMap has two options to create random values within the attribute table. The first method uses VB Script while the second method uses Python scripting.

1. Open ArcMap

Open the attribute table of a selected shapefile and add a new field.

2. Calculate Random Numbers (VB Script)

1. Open the field calculator by right clicking on the newly created field and selecting **Field Calculator...**
2. Click **Yes** when asked about editing outside of a edit session.



3. In the field calculator window, check the box next to **Advanced**.

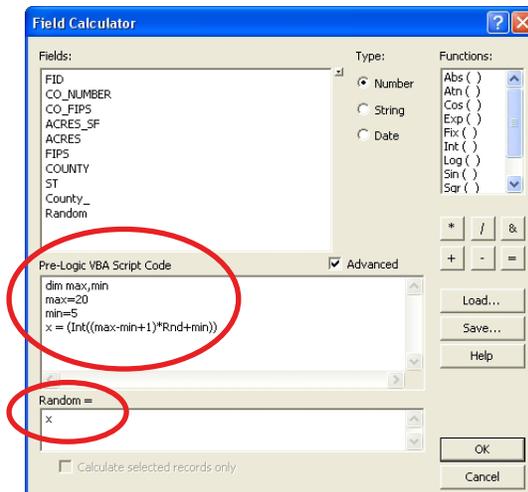


4. In the **Pre-Logic VBA Script Code** text box type in the following text.

```
dim max, min  
max=20  
min=5  
x=(Int((max-min+1)*Rnd+min))
```

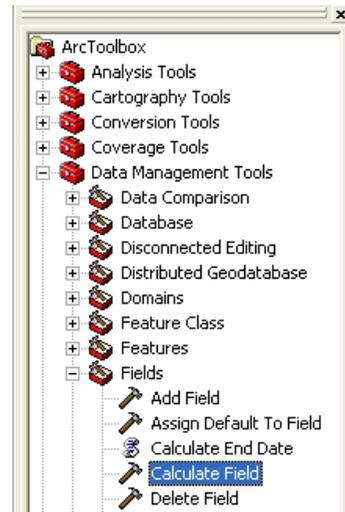
In the equation above, **max=20** and **min=5** sets the maximum and minimum values that will be created in the field. No values will be randomly created below 5 or above 20.

5. In the **Random =** text box type **x**.

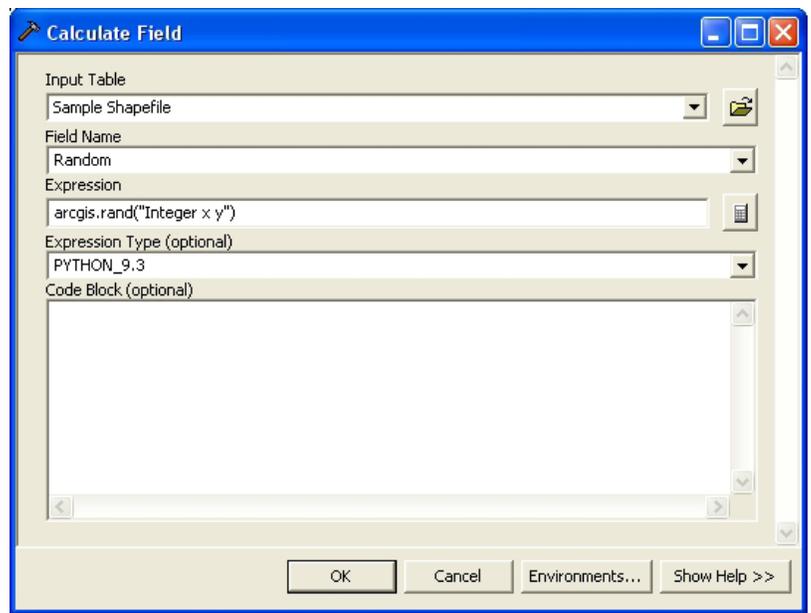


3. Calculate Random Numbers (Python 9.3)

1. Open up ArcToolbox.
 - Expand **Data Management Tools** > **Fields**.
 - Open the **Calculate Field**.



2. In the Calculate Field window, fill out the following:
 - Under **Input Table** select the shapefile to be used.
 - Under **Field Name** select the field where the random value is to be calculated.
 - Under **Expression** type **arcgis.rand("Integer x y")** where x represents the minimum value and y represents the maximum value that is to be randomly calculated.
 - Under **Expression Type (optional)** select **PYTHON_9.3**.
 - Click **OK**.
3. Open up the attribute table to see the randomly assigned values in the **Random**



Contacts

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This task sheet and more are available for free download at www.extension.iastate.edu/gis.

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