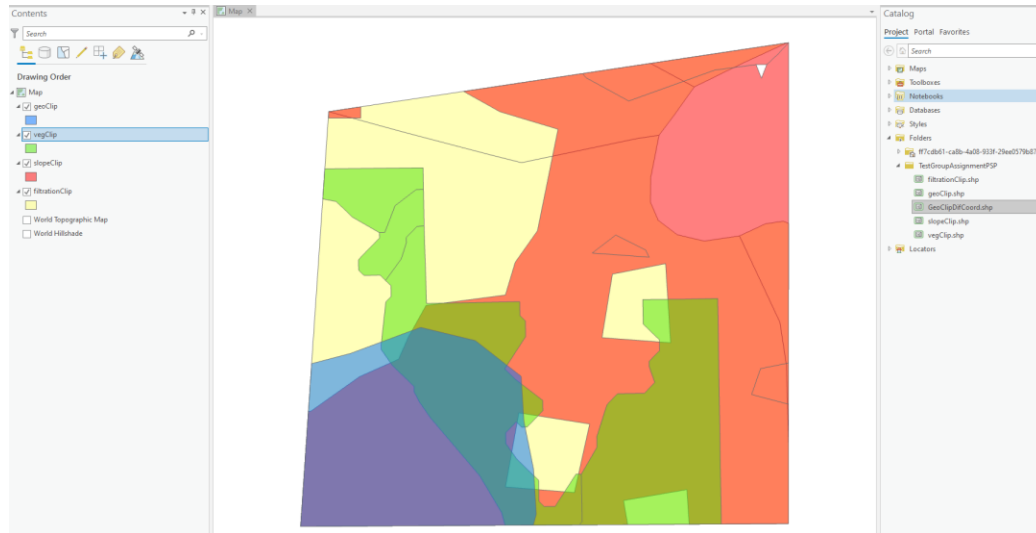


# GEOM67 – Group 7 Project Test Values Guide

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## The Test Data



Test data was acquired through the Mastering ArcGIS by Maribeth Price demo data. Four related shapefiles covering the same area were clipped to provide a smaller and more manageable testing data set. The five polygon files for testing our program are: 1. geoClip.shp, 2. vegClip.shp, 3. slopeClip.shp, 4. filtrationClip.shp, and 5. geoClipDifCoord.shp. The 5<sup>th</sup> file is a special “extreme” case whereby the spatial coordinate system was purposefully set to be different from the other files. One of our assumptions is the user will have already prepped their files for use in our program, so we wanted to test the scenario where a file was clearly not prepped correctly.

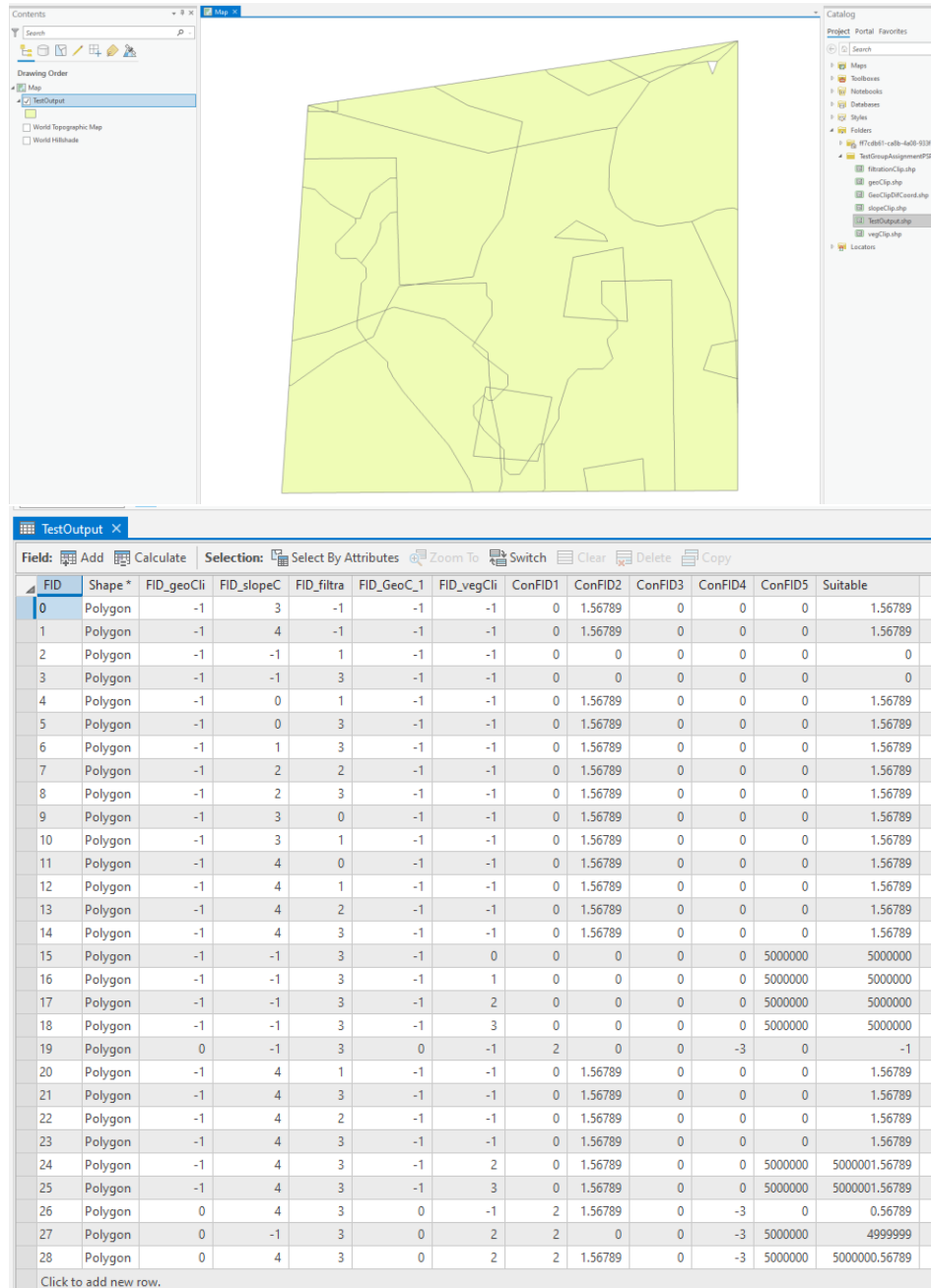
## Test Values

Shapefile	Weight	Rationale
geoClip.shp	2	A normal integer value within expected range
vegClip.shp	1.56789	A normal float value within expected range
slopeClip.shp	0	An unusual assignment of 0
filtrationClip.shp	-3	An unusual assignment of a negative number
geoClipDifCoord.shp	5000000	An extreme number far greater than what would be expected

We selected an assortment of test values for user input weights that covers all of the variation in values that could be entered. Not included in this table are illegal values of strings (i.e. non-numbers). We tested this ourselves and as expected, our error handlers catch the error and the program does not continue.

# Test Outcome

For this test, the user output file name was set to “TestOutputG7”. Provided below are screenshots of the result when the output file is opened in ArcGIS PRO (the file is also provided in our submission), the newly updated attribute table, as well as what is displayed in the Python terminal as it is executed.



The screenshot displays the ArcGIS Pro interface. The main map area shows a collection of yellow polygons. The left pane contains the 'Contents' window with 'TestOutput' selected. The right pane shows the 'Catalog' window with a project folder containing various files, including 'TestOutput.shp'. Below the map, the 'TestOutput' attribute table is visible, showing 28 rows of data with columns for FID, Shape, and various numerical attributes.

FID	Shape *	FID_geoCli	FID_slopeC	FID_filtira	FID_GeoC_1	FID_vegCli	ConFID1	ConFID2	ConFID3	ConFID4	ConFID5	Suitable
0	Polygon	-1	3	-1	-1	-1	0	1.56789	0	0	0	1.56789
1	Polygon	-1	4	-1	-1	-1	0	1.56789	0	0	0	1.56789
2	Polygon	-1	-1	1	-1	-1	0	0	0	0	0	0
3	Polygon	-1	-1	3	-1	-1	0	0	0	0	0	0
4	Polygon	-1	0	1	-1	-1	0	1.56789	0	0	0	1.56789
5	Polygon	-1	0	3	-1	-1	0	1.56789	0	0	0	1.56789
6	Polygon	-1	1	3	-1	-1	0	1.56789	0	0	0	1.56789
7	Polygon	-1	2	2	-1	-1	0	1.56789	0	0	0	1.56789
8	Polygon	-1	2	3	-1	-1	0	1.56789	0	0	0	1.56789
9	Polygon	-1	3	0	-1	-1	0	1.56789	0	0	0	1.56789
10	Polygon	-1	3	1	-1	-1	0	1.56789	0	0	0	1.56789
11	Polygon	-1	4	0	-1	-1	0	1.56789	0	0	0	1.56789
12	Polygon	-1	4	1	-1	-1	0	1.56789	0	0	0	1.56789
13	Polygon	-1	4	2	-1	-1	0	1.56789	0	0	0	1.56789
14	Polygon	-1	4	3	-1	-1	0	1.56789	0	0	0	1.56789
15	Polygon	-1	-1	3	-1	0	0	0	0	0	5000000	5000000
16	Polygon	-1	-1	3	-1	1	0	0	0	0	5000000	5000000
17	Polygon	-1	-1	3	-1	2	0	0	0	0	5000000	5000000
18	Polygon	-1	-1	3	-1	3	0	0	0	0	5000000	5000000
19	Polygon	0	-1	3	0	-1	2	0	0	-3	0	-1
20	Polygon	-1	4	1	-1	-1	0	1.56789	0	0	0	1.56789
21	Polygon	-1	4	3	-1	-1	0	1.56789	0	0	0	1.56789
22	Polygon	-1	4	2	-1	-1	0	1.56789	0	0	0	1.56789
23	Polygon	-1	4	3	-1	-1	0	1.56789	0	0	0	1.56789
24	Polygon	-1	4	3	-1	2	0	1.56789	0	0	5000000	5000001.56789
25	Polygon	-1	4	3	-1	3	0	1.56789	0	0	5000000	5000001.56789
26	Polygon	0	4	3	0	-1	2	1.56789	0	-3	0	0.56789
27	Polygon	0	-1	3	0	2	2	0	0	-3	5000000	4999999
28	Polygon	0	4	3	0	2	2	1.56789	0	-3	5000000	5000000.56789

```

Suitability Analysis for Vector Polygon Data (SAVPD) v1.0
Welcome to SAVPD program! All inputs must be located within the directory that this program is saved to: C:\PSP\Group7Project\G7implementation\TestGroupAssignmentPSP
The output shapefile will also be saved to this directory
-----

These are the shapefiles available for inclusion in the suitability analysis within the current directory:

filtrationClip.shp
geoClip.shp
GeoClipDifCoord.shp
slopeClip.shp
vegClip.shp

Enter first shapefile name: geoClip.shp

Enter weight: 2

Enter shapefile name: vegClip.shp

Enter weight: 1.56789

Would you like any more shapefiles to participate in the suitability analysis? (Y/N): y

Enter shapefile name: slopeClip.shp

Enter weight: 0

Would you like any more shapefiles to participate in the suitability analysis? (Y/N): y

Enter shapefile name: filtrationClip.shp

Enter weight: -3

Would you like any more shapefiles to participate in the suitability analysis? (Y/N): y

Enter shapefile name: geoClipDifCoord.shp

Enter weight: 5000000

Would you like any more shapefiles to participate in the suitability analysis? (Y/N): n

Shapefiles and respective weights for suitability analysis:

File Name          Weight
-----
geoClip.shp        2.00
vegClip.shp        1.57
slopeClip.shp      0.00
filtrationClip.shp -3.00
geoClipDifCoord.shp 5000000.00

Enter the name of the output suitability analysis file: TestOutput

Calculating Suitability Analysis...

Suitability Analysis Complete
Output file: TestOutput has been created in: C:\PSP\Group7Project\G7implementation\TestGroupAssignmentPSP
PS C:\PSP\Group7Project\G7implementation\TestGroupAssignmentPSP> 

```

## Member Contribution

Matthew Archbell: Design, Coding (all aspects), Debugging, Testing, Report writing

Tasfia Khaled: Design, Coding (all aspects), Debugging, Testing, Report writing

Eric McNeill: Design, Coding (all aspects), Debugging, Testing, Report writing

Ramandeep Singh: MIA

Kezia Yu: Design, Coding (all aspects), Debugging, Testing, Report writing