

Discovering GIS and ArcGIS
Chapter 20

Name: _____

Question 20.1: The model (such as it is) could be run right now. What would happen and what would the model output be (at this stage)?

Question 20.2: Why did the Raster Calculator tool not turn yellow?

Question 20.3: What do the values of 1 and 0 in the flatland grid represent?

Question 20.4: What would the output grid result be if you used “and” instead of “or” in each case of this Map Algebra expression? Why?

Question 20.5: Write down the operation needed to find the suitable sites using the five final output grids and appropriate logical operators. For example, you would write something like flatland XOR (awayhighs OR nearrivers)—or whatever set of grids and operators will find the suitable sites.

Question 20.6: How many grid cells are considered “suitable sites” for the ecological preserve? In real-world values, how many square meters are considered “suitable sites”?

Question 20.7: What sites would you (as the developer in this scenario) consider particularly non-viable in relation to other land uses? When answering this question, refer to specific sites on your final results (and highlight these on the screen with graphics). For example, are there any sites (specifically) that you feel are too close to urban areas, too close to agricultural areas, or too

small for an ecological preserve? Explain (using specific highlighted or circled sections of your results) why these areas are particularly non-viable.

Question 20.8: What sites would you (as the developer in this scenario) consider particularly viable in relation to other land uses? When answering this question, refer to specific sites on your final results (and highlight these on the screen with graphics). Explain (using specific highlighted or circled sections of your results) why these areas would be particularly viable (in contrast with the non-viable sites you chose in Question 20.7). Make sure the graphics you use here can be visually distinguished from those you used in Question 20.7.

Step 20.9:

Print a layout according to the guidelines presented here. Also, print out the final geoprocessing workflow and attach it to this answer sheet.