Project #1 (Obelisk Project) grading sheet. Fall 2022 (Revision 1).

Student name: **Grade date:**

Student PID: **Grader:**

1. Student should be logged in, with Visual Studio running, and ready to demo the program, including being able to recompile. Ask: Did they upload to gradescope? On time? Late?
2. Does the program show two obelisks in the correct positions and orientations? (Exact positions and shapes may vary, but both should be visible at once. Do the rotation, culling, and wireframe commands still work (arrows, c, w)? [5 pt]

3. Are the shaded and flat surfaces rendered correctly? Are the colors similar to what was required? There should be no extra discontinuities in colors beyond those in the demo. (Possibly discuss this, e.g, the way that flat shading looks strange, and the way that corners and edges become hard to see with smooth shading.) [5 pt]

4. In wireframe mode: can the back faces be toggled with the "c" command? Are all faces correctly facing outward? (Use wireframe mode, and rotation, to view this. It can also often be seen in non-wireframe mode. Be sure to view from all sides. Discuss any problems found. [5 pt]

5. Examine the code: Does it use triangle strips for the sides? A triangle fan for the tip? Triangles for the bottom of the base? Does it use the correct number of vertices for each glDrawArrays command? [5 pts] (*A few students may use only one or two arrays/VAOs/VBOs and use glDrawElements(-,N,-) with N not zero. Most students will use four arrays and four VAO/VBO pairs. Either is OK.*)
    Does it use glVertexAttrib3f to set the color for the base? [0pt, but if so +2pt which can make up for other lost points if any.]

6. Explore whether there is any visible aliasing (surely) or z-fighting (perhaps). Discuss with the student. [0 points, but +2 pt for saving an image of it can make up for other lost points, if any.]

7. Ask the student to put a breakpoint to capture either "w" or "c" keystrokes. Ask them how to see variables' values (type the variable name in the Watch window). Let them single step and watch values change. Have them change the variable's value in the Watch windows. [0 pt]

8. If any points are lost above, can the student immediately fix it in the code, or explain why it does not work and how to fix it? [up to +2 per item if appropriate]

9. Ask student: were there any particular difficulties or do they have questions? Discuss. Any other unusual features of the code? [0 pt]

10. **Grade (Maximum is 20):**

(Grader keeps this sheet for grade recording. Students may photograph if they want a copy. Grades subject to change after review by the Professor and TAs.)