

Project #2 (Solar) grading sheet (Draft).

Student name:

Grade date:

PID (ask privately):

Grader:

1. Ask whether program source turned in to gradescope as specified? On time? [Possible point deduction TBD.]
2. Do the controls work? Run speed, “r”, “R”. Single step “s”. Is the solar system in fully view? Do moons, planets, and sun avoid interpenetrating badly? [2 pt]
3. Is the sun a binary sun? Do they rotate around the center of the solar system? [3pt]
4. Is the moon OK? Does it revolve around the earth 12 times/year? Is the rotation rate of the earth OK? Have the student slow down the speed to examine both the Earth and the moon. Show the student the aliasing that is making earth appear to be not rotating when the time step is big. [2pt]
5. Is the torus for the Earth’s orbit done well? [3 pt]
6. Is the second planet (Planet X) ok? Does it revolve around the sun every 500 Earth days? Does it not jump discontinuously? [3 pt]
7. Is the submoon (moon’s satellite) correct? [2 pt]
8. Is the tilt correct? Ask them to show you the code controlling the tilt. If necessary, set the view azimuth to zero to examine the tilt. What method did they use for the tilt? Do they understand how it works? [4 pt for correct implementation; if student cannot explain how the code works, only 3 pt.] Enter code for the method: _____

Tilt-Axis OR Revolve&Tilt OR Translate

9. If the tilt works, did they set things so that an inhabitant of the earth sees a total of 365 days (sunrises and sunsets)? This is tricky! What method was used? [1 pt]
10. Ask the student to put a breakpoint in the code with DayOfYear is updated. Hit F10/F5 to see the value change. Then remove the breakpoint, and let it run. (Skills to know: Difference between F10 and F5. How to start the program again after a breakpoint is hit.)
11. 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 1 point per item if appropriate]
12. Ask the student what was the hardest part? Were there any particular difficulties other than the tilt? Does the student have any questions? Discuss. [0 pt]
13. Grade (0-20):