Errors that fixed:

There were 4 errors that I corrected to make the code work:

I changed the while loop so that it checks if the difference is greater than 10^-4, not less than. The original loops would not work as the difference was not less than 10^4 in the first place. There was an extra parenthesis that I deleted in the calculation of one of the coordinates of r1ecliptic. I indented the last two lines of the code (asteroid pos and trail) so they are inside the while loop 1==1. This is so the asteroid position is constantly updated and the trail is appended.

Changes in the code:

I rewrote most of the code as I could not understand the organization of the code. I slightly altered the solvekep function by taking out Mtrue and renaming Eguess as E. I redid all the calculations to find the ecliptic coordinates and split it into steps, calculating Cartesian coordinates, the radius, the mean anomaly, and then the ecliptic coordinates. To better organize, I commented on each steps of the code. I also changed dt to delta t and used it in the while loop to update the time.

Added features:

Aside from reorganizing and rewriting most of the code, I did not add many additional features. I only added a label to the asteroid and the sun that follows their positions. If I decide to further improve the visualization, I can add the orbits of other planets and their labels.

Verification:

I verified my code was correct by comparing the values for m and e with the original code. I also compared my values to those in the code of other SSPers. The orbit of the asteroid is also an ellipse. I also verified my code by using the equations from math and physics class.