Problem 2 Simulation

Here, we drew the orbits for (b) and (d) for comparison.

We can see that in (b), since the frequency for the circular motion and the S.H.O. motion are the same, they will form a clos orbit, and the orbit shape is in general an oval.

However, in (d), the frequency for the circular motion () and the frequency for the S.H.O motion () are in general different, it will not form a close orbit, and will form a complicated pattern as follows.

