308 notes 8.1-8.4

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This is a wild note

1 The Equation of the Orbit

The derivation of equation (8.40) looks illegal.

Why is equation (8.43) is a straight line???

2 The Kepler Orbits

Great choice of the symbol for length, $l^2/\mu\gamma$, same as the speed of light...

2.1 The Bounded Orbits

Little innocent ϵ turns out to be the eccentricity of the orbit, what a surprise.

2.2 The Orbital Period; Kepler's Third Law

Why the accuracy of Kepler's third law not bad after a lot of approximations.

2.3 Relation Between Energy and Eccentricity

What about $\epsilon = 1$?

3 The Unbounded Kepler Orbits

So $E = 0$ when $\epsilon = 1$. Why? Because the kinetic energy and the potential energy are the same but different in sign?

4 Changes of Orbits

Boring.