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of Astronomical units for Kepler problem:

1 AU distance = 1 Earth-sun distance ~ 1.5E11 m (93 million miles)  
1 AU mass = 1 Solar mass (M) ~ 2.0E20 kg  
1 AU time = 1 year ( time for satellite(earth) to orbit sun at  
radius of 1 AU distance )  
G\*M == gravitational constant times mass of sun

For circular orbit,  
 $m (v^2/r) = (G * M) * m / r^2$

So  $v = \sqrt{G*M/r}$  and period  $T = (2*\pi*r)/v = (2*\pi* r^{(3/2)} )/\sqrt{G * M}$

In AU units,  $T = 1 \text{ yr}$ ,  $r = 1$ , so  $1 = (2*\pi)/\sqrt{G * M}$ , and  $G*M$   
(constant) =  $4 * \pi^2$  !!

dt = .001 means .001 year  
x0 = 1 means one earth sun distance

Makes plotting and computing much simpler- but maybe you lose physical intuition.

Dave