9) Solve for *r*:

$$a = \frac{Gm_2}{r^2}$$

10) Solve for *d*:

$$V_f^2 = V_i^2 + 2ad$$

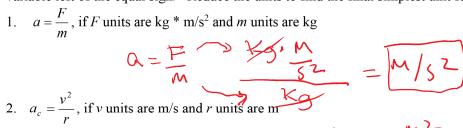
$$V_f = V_i^2 - V_i^2$$

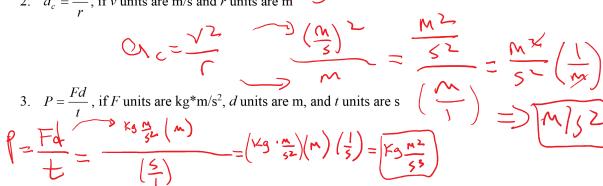
$$Z_a$$

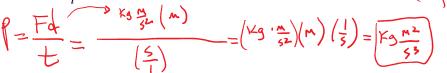
IV. <u>Dimensional Analysis</u>

Based on given units for the variables on the right, determine what would be the unit(s) for the variable left of the equal sign. Reduce the units to find the final simplest unit for the variable.

1.
$$a = \frac{F}{m}$$
, if F units are kg * m/s² and m units are kg







4. $R = \frac{\rho L}{A}$, if ρ units are $\Omega^* m$, L units are m, and A units are m^2 $Q = \frac{\rho L}{A} = \frac{(\Omega \cdot m)(m)}{(m)} = \boxed{\Omega}$

5. $PE_s = \frac{1}{2} kx^2$, if k units are N/m and x units are my charge costs, it charge courts)

6. $F_g = \frac{Gm_1m_2}{r^2}$, if G units are N*m²/kg², m₁ and m₂ are kg, and r units are m.

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