Kinematics Review

Constant Velocity ⇝ $v = \frac{\Delta d}{\Delta t}$

Constant Acceleration

$$a = \frac{\Delta V}{\Delta t} \quad (\text{where } \Delta V = V_2 - V_1)$$

$$V_{ave} = \frac{\Delta d}{\Delta t} \quad (\text{where } V_{ave} = \frac{V_1 + V_2}{2})$$

maybe useful equations:

$$\Delta d = V_1 t + \frac{1}{2} a t^2$$

$$\Delta d = V_2 t - \frac{1}{2} a t^2$$

$$V_2^2 = V_1^2 + 2a\Delta d$$

There are $\leq$ 5 kinematics variables in acceleration problems: $V_1, V_2, \Delta t, \Delta d, a$.

If you know any 3 of these, you can find the other 2.