



Name: \_\_\_\_\_ Hr. \_\_\_\_\_

**DERIVING AN EQUATION FOR 1 STICKER:**

Derive (which means show how to get) the equation:  $v_f^2 = v_i^2 + 2a\Delta y$ .

YOU MUST SHOW ALL OF THE ALGEBRAIC STEPS!

Where does this equation come from? All it is an algebraic combination of two of our other equations. *(In other words, solve for  $\Delta t$  out of  $a = (v_f - v_i)/\Delta t$  and plug that expression in for  $\Delta t$  into this equation  $\Delta y = v_i \Delta t + 1/2a\Delta t^2$  and simplify. Don't forget to FOIL!) Show all the steps very clearly!*