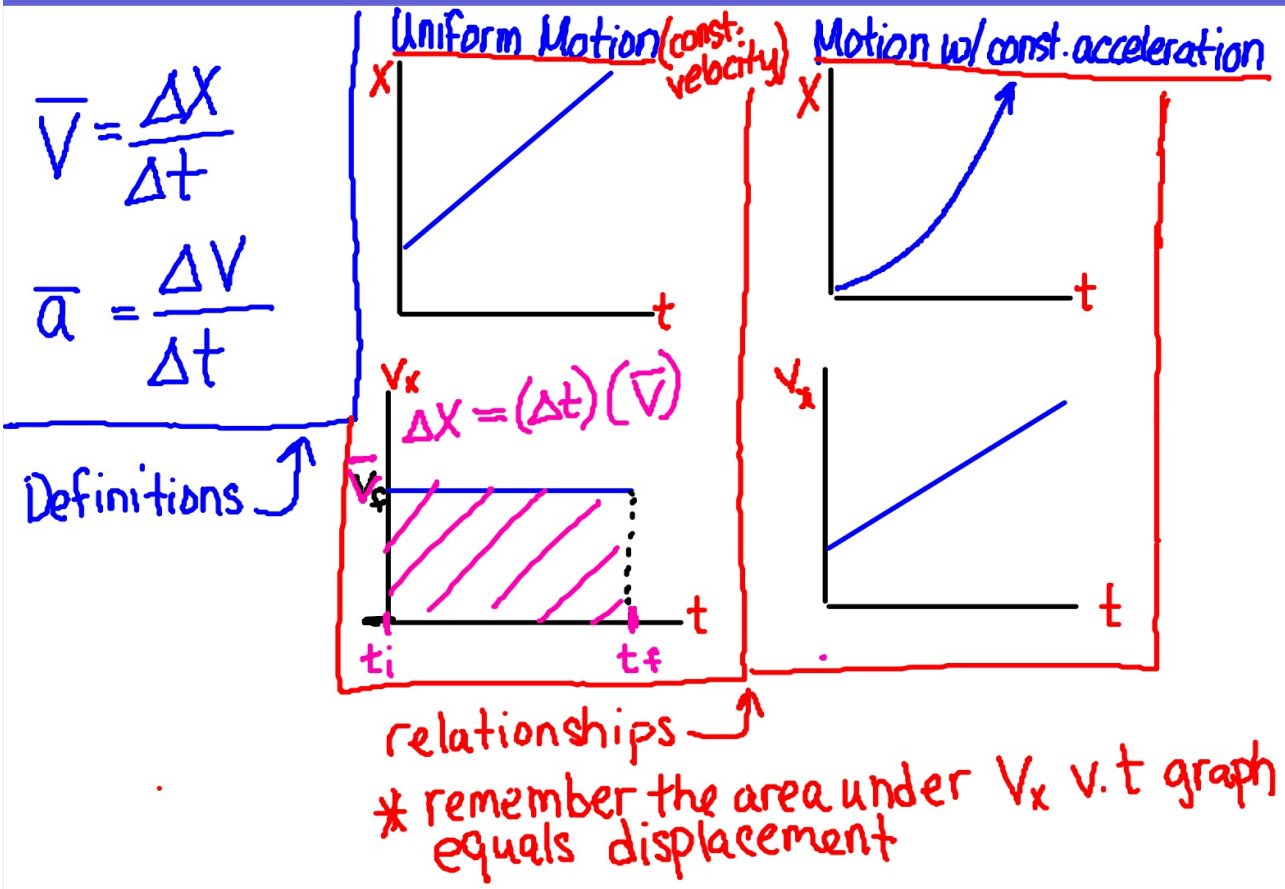

Do Now (4B):

1. Turn-in Velocity-Time Graph Packet to Ms. Grant.
2. Take-out two sheets of paper, a pencil, a calculator, and a ruler.
3. Clear your table of all other items.
4. Be ready for quiz at the bell!

Eqn #1 $x_f =$ _____ $x_i, \bar{v}, \Delta t$

$$\bar{v} = \frac{\Delta x}{\Delta t}$$

$$* \bar{v} = \frac{x_f - x_i}{\Delta t} * \Delta t$$

$$\Delta t \cdot \bar{v} = x_f - x_i$$

$$+x_i \qquad +x_i$$

$$x_f = x_i + \bar{v} \cdot \Delta t$$

$$(d_f = d_i + \bar{v}t)$$

* only use for problems with constant velocity!

Eqn. #2: $v_f =$ _____ $v_i, \bar{a}, \Delta t$

$$\bar{a} = \frac{\Delta v}{\Delta t}$$

$$* \bar{a} = \frac{v_f - v_i}{\Delta t} * \Delta t$$

$$\Delta t \cdot \bar{a} = v_f - v_i$$

$$+v_i \qquad +v_i$$

$$v_f = v_i + \bar{a}\,\Delta t$$

$$(v_f = v_i + at)$$

only used for problems with constant acceleration.

Equation #3 $x_f =$ _____ $x_i, v_i, \bar{a}, \Delta t$

$\bar{a} = \frac{\Delta v}{\Delta t}$

$\bar{a} = \frac{v_f - v_i}{\Delta t}$

$v_f = v_i + \bar{a}\Delta t$

* Not the easy way!
* Use v-t graph for constant acceleration!

$\Delta x = x_f - x_i = \frac{1}{2}(\Delta t)(\Delta v) + \Delta t \cdot v_i$

$x_f - x_i = \frac{1}{2}(\Delta t)(v_f - v_i) + \Delta t \cdot v_i$

$+x_i \quad +x_i$

$x_f = x_i + v_i \Delta t + \frac{1}{2}(v_f - v_i)(\Delta t)$

$x_f = x_i + v_i \Delta t + \frac{1}{2}(v_i + \bar{a}\Delta t - v_i)(\Delta t)$

$x_i + v_i \Delta t + \frac{1}{2}\bar{a}\Delta t(\Delta t)$

$$x_f = x_i + v_i \Delta t + \frac{1}{2}\bar{a}(\Delta t)^2$$