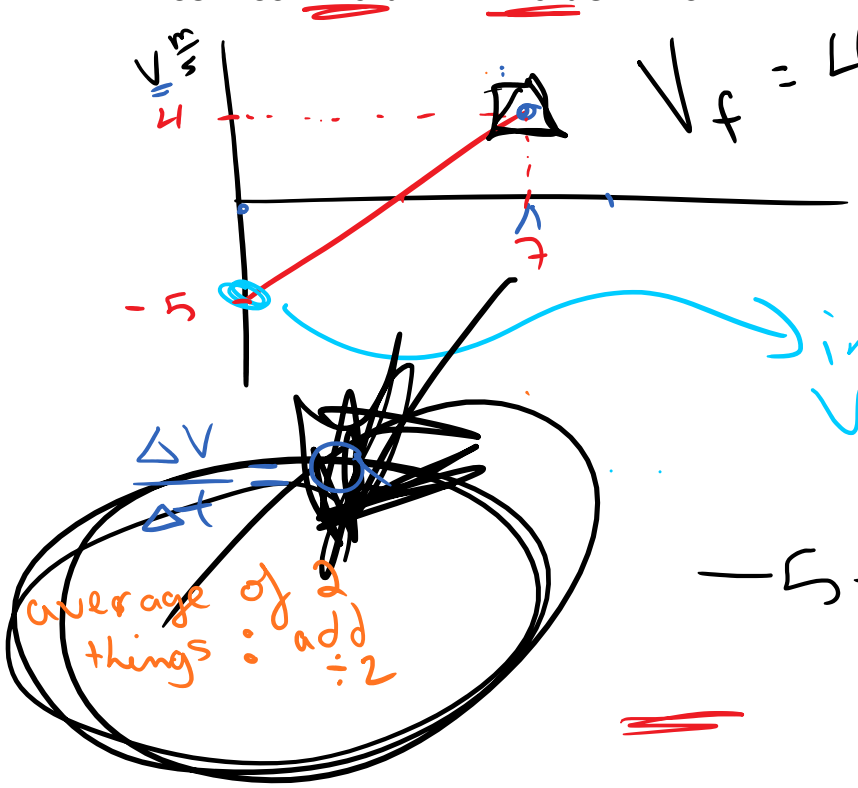
Velocity Vs Time graphs

Thursday, September 30, 2010 2:23 PM

check Axes every time

Similar to Displacement vs. time but different.

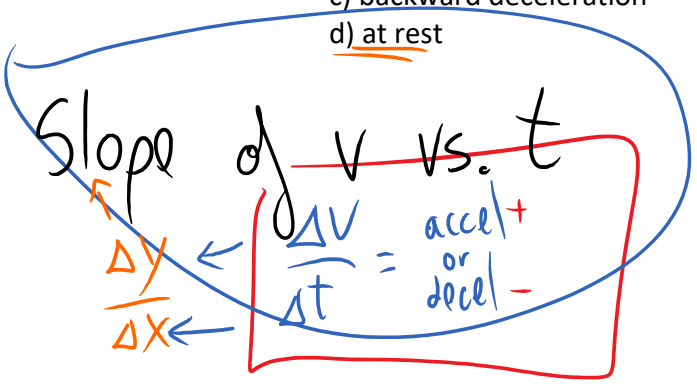
NEVER CONFUSE V vs. t WITH D vs. t GRAPHS

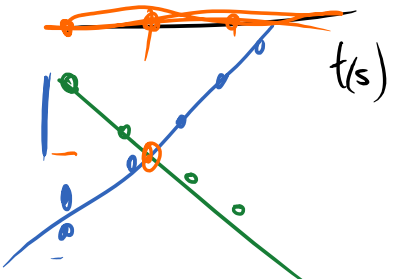


$-5 + 4 = \frac{-1}{2} = -0.5 \frac{m}{s}$

= 28m

Draw a V vs. t showing a) forward deceleration
b) backward acceleration
c) backward deceleration
d) at rest

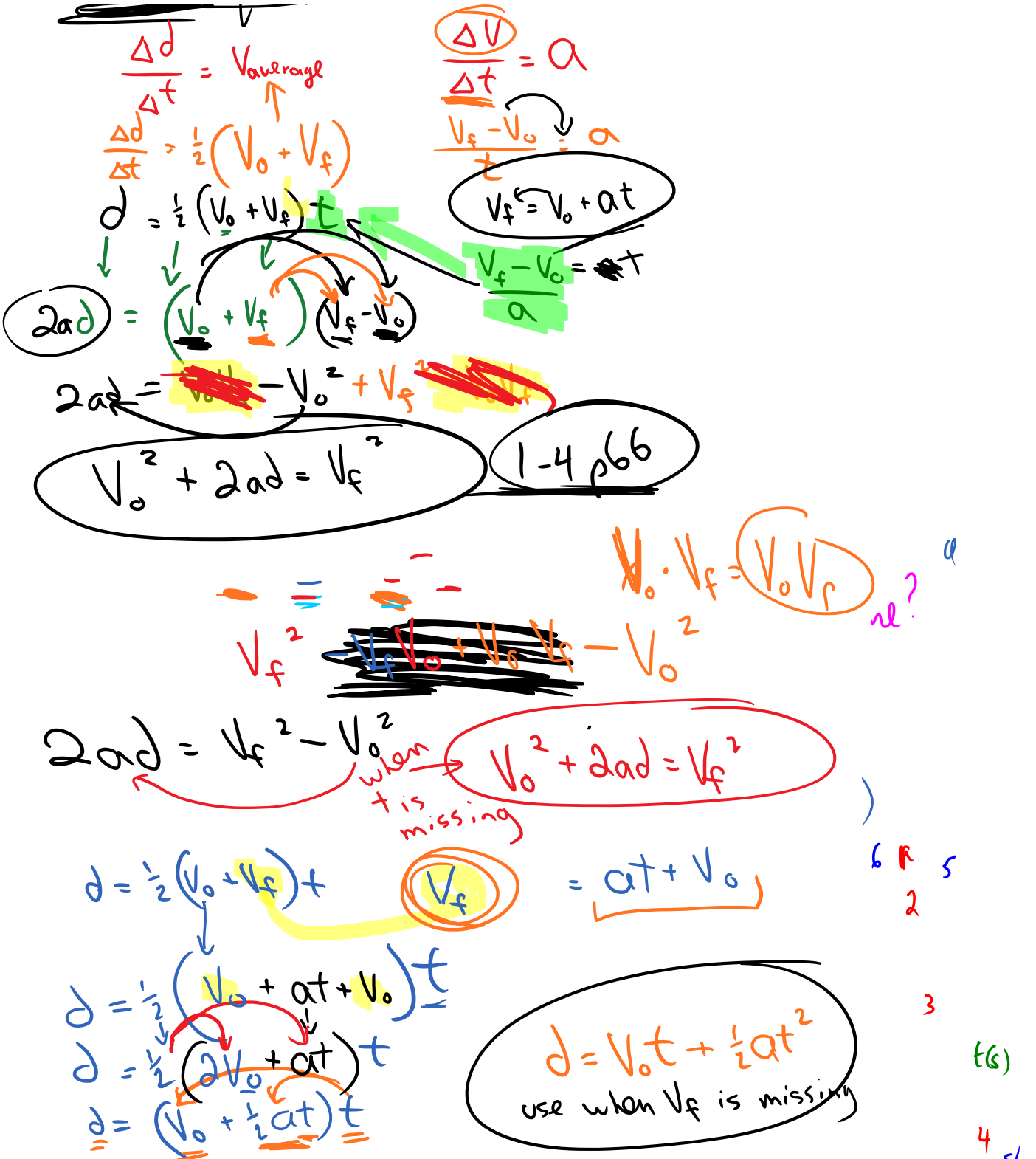




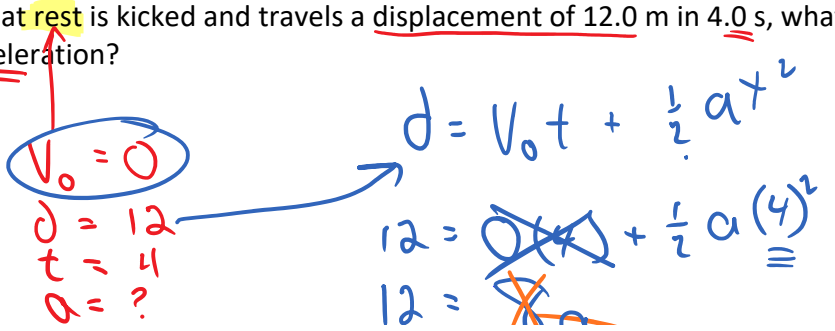
$\frac{\Delta d}{\Delta t} = V$ $\frac{\Delta V}{\Delta t} = a$

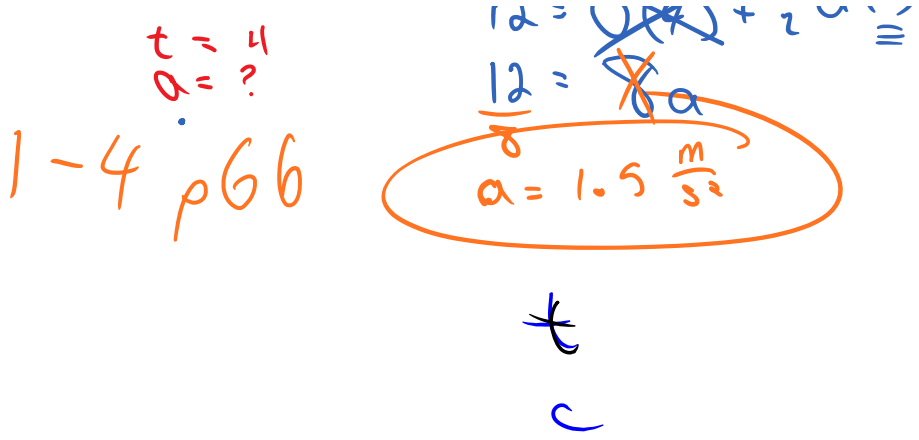
Kinematic Equations ← equations of motion

$\frac{\Delta d}{\Delta t} = V_{average}$ $\frac{\Delta V}{\Delta t} = a$



A cat initially at rest is kicked and travels a displacement of 12.0 m in 4.0 s, what is The cat's acceleration?





The area of a velocity vs time graph:

The area of a velocity vs time graph represent the displacement of the object.

Any time you have a graph the area represent the product of you axes variables.

Find the displacement of the object on the graph below after 10 s: