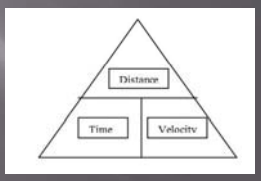
REVIEW MOTION AND UNITS

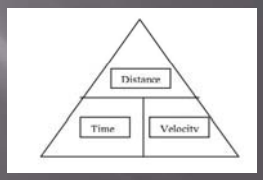
DTV Triangle

- When to use it
- Get the Units Right



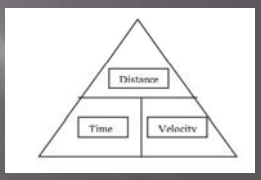
Velocity (speed)

- V = D/T
- Units = m/s



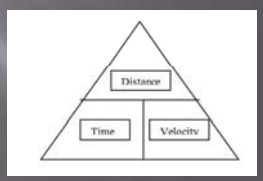
Time

- T= D/V
- Units = s



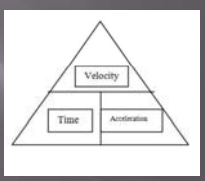
Distance

- D = T * V
- Units = m



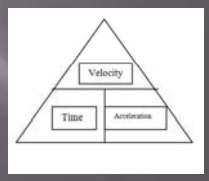
VTA Triangle

- When to use it
- Get the Units Right



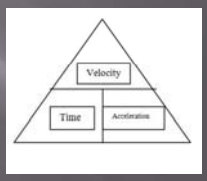
Acceleration

- A = V/T = $(v_2-v_1)/(t_2-t_1)$
- Units = m/s^2
- Positive or Negative



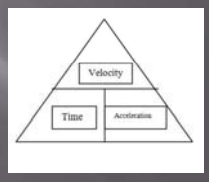
Velocity

- V = T * A
- Units = m/s
- Positive or Negative



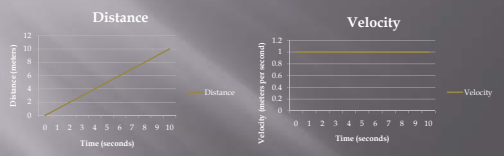
Time

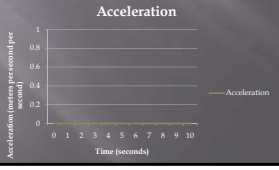
- Time = V/A
- Units = s
- Time is NEVER negative



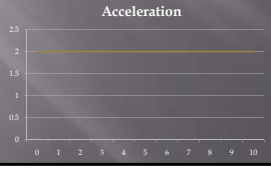
MOTION GRAPHS

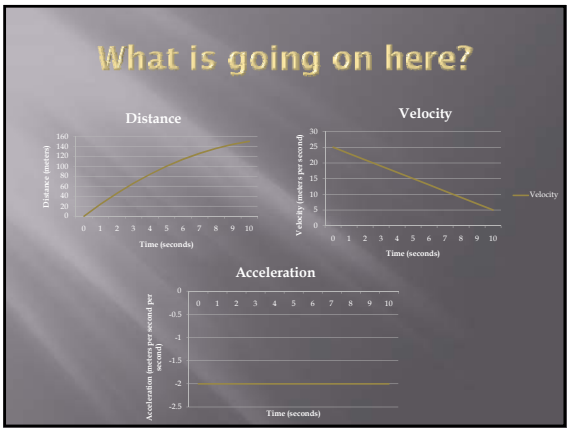
Constant Velocity Graphs





Constant Acceleration Graphs




What is going on here?
Distance
Distance (meters)
160
140
120
100
80
60
40
20
0
0 1 2 3 4 5 6 7 8 9 10
Time (seconds)
Velocity
Velocity (meters per second)
30
25
20
15
10
5
0
0 1 2 3 4 5 6 7 8 9 10
Time (seconds)
Velocity
Acceleration
Acceleration (meters per second per second)
0
-0.5
-1
-1.5
-2
-2.5
0 1 2 3 4 5 6 7 8 9 10
Time (seconds)