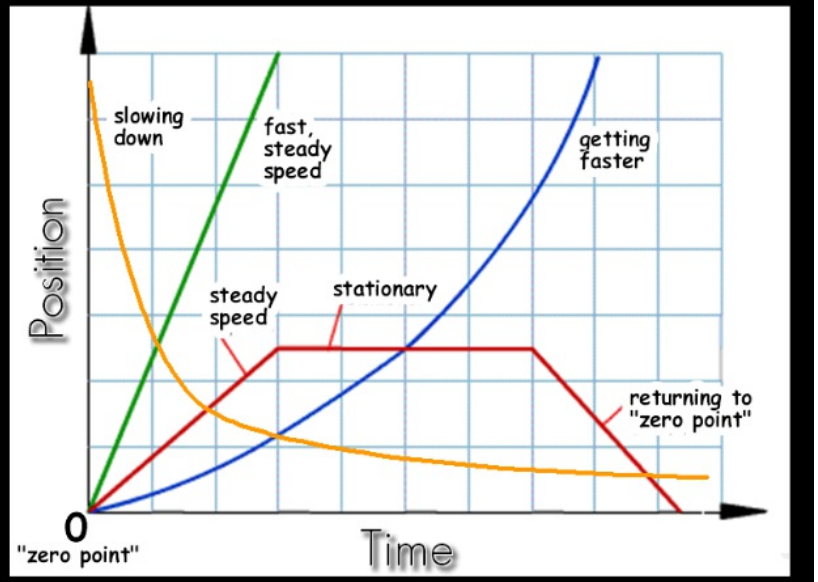
4.6.20 Graphing: PT Graphing 2

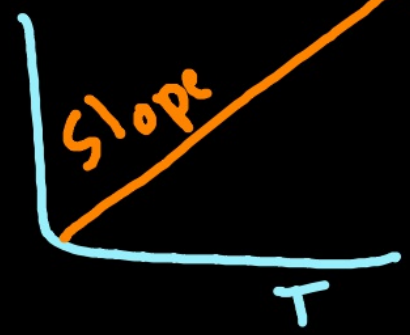
Today's Objectives:

- Learn all 7 PT graphs
- Solve 'racing' problems
- Use computer software to get slope and intercept



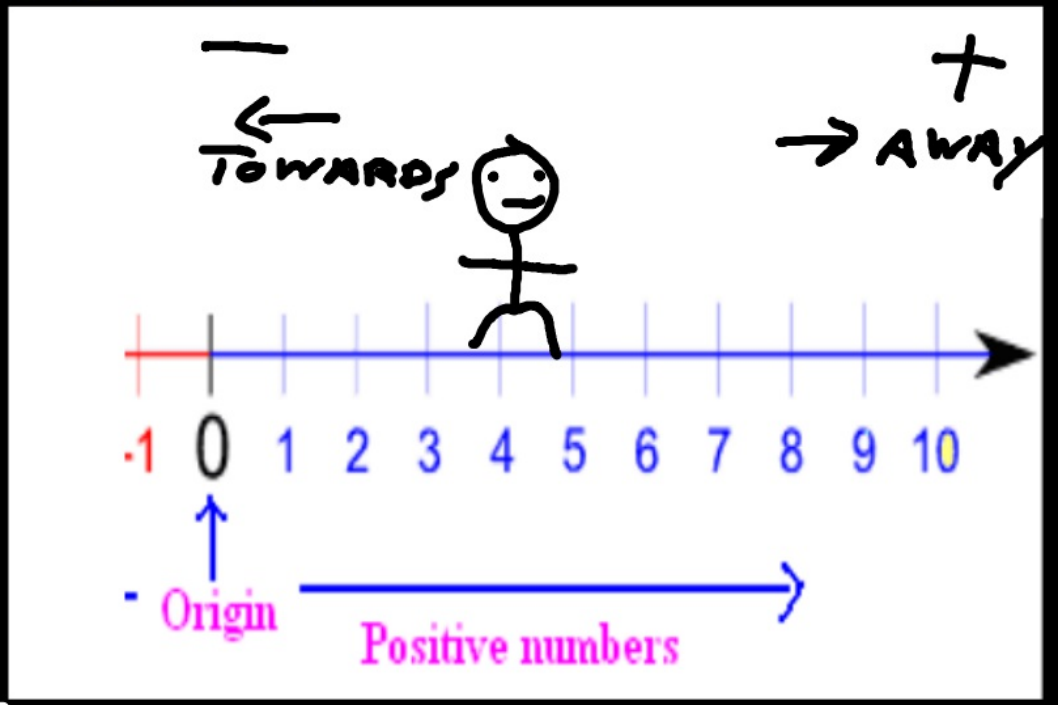
- The "zero meter position" is the Origin.
- Cruise Control is also known as Constant Velocity (C.V.)
- The slope of a P/T graph is its Velocity.

Uphill: +
Downhill: −



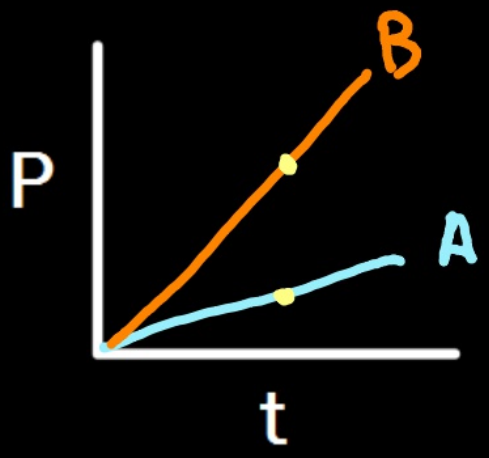
What are the 7 ways to move along a line?

1. Still
2. CV - Away
3. CV - Towards
4. Speed Up Away
5. Slow Down
6. Speed Up Towards
7. Slow Down Towards

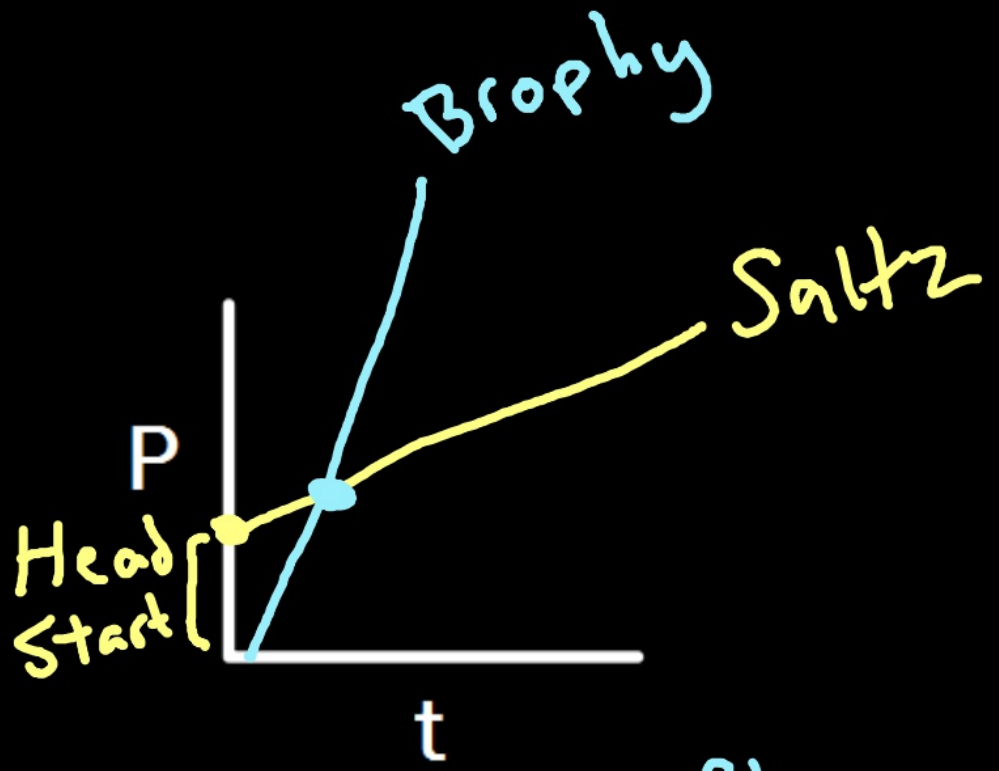


"Racing" Questions

Which car is moving faster, A or B?

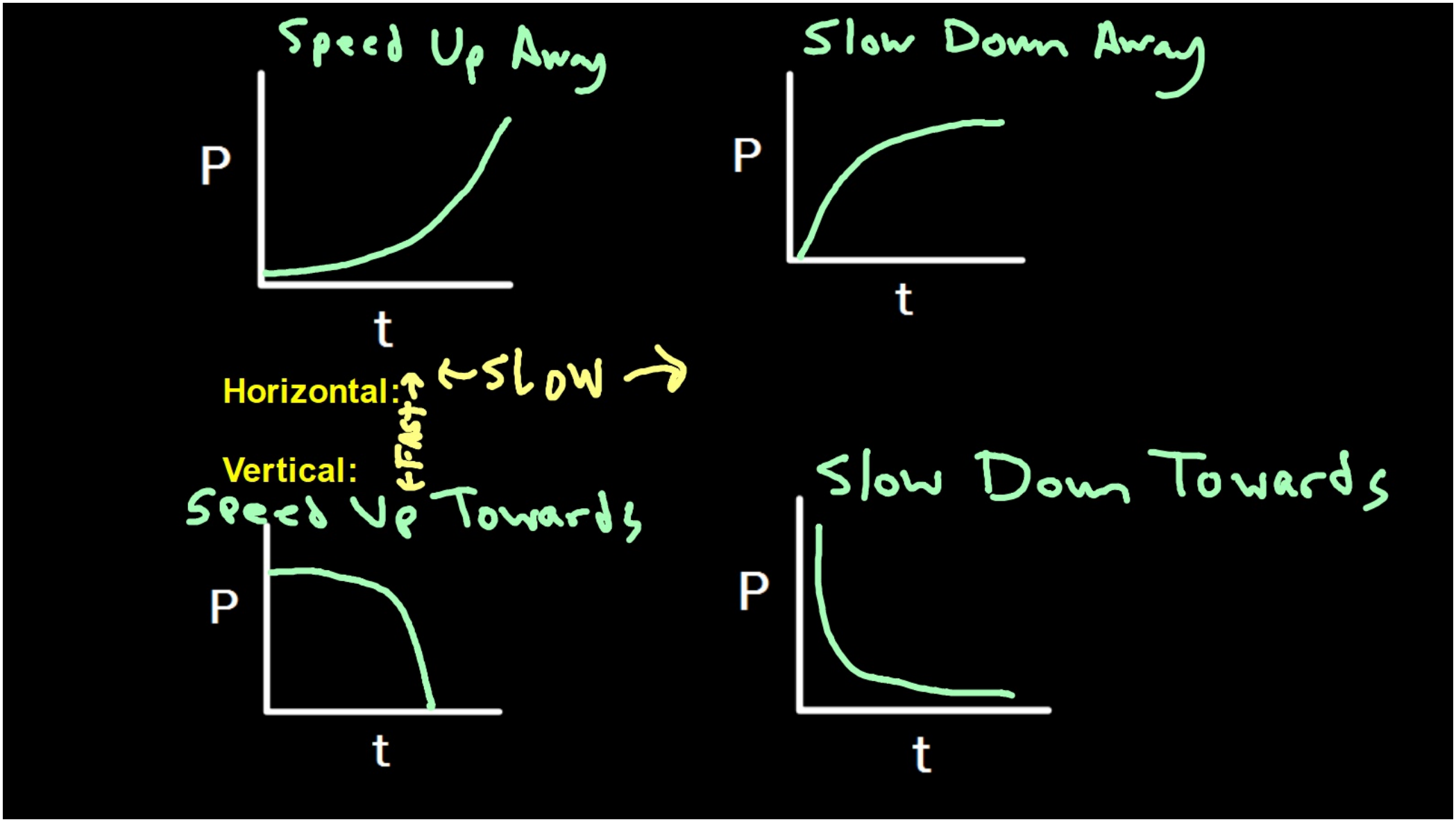


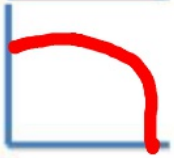
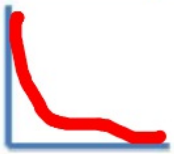
B: Steeper Slope



Lines Cross: Same Place
Brophy passes Saltz

(NOT SAME VELOCITY!)

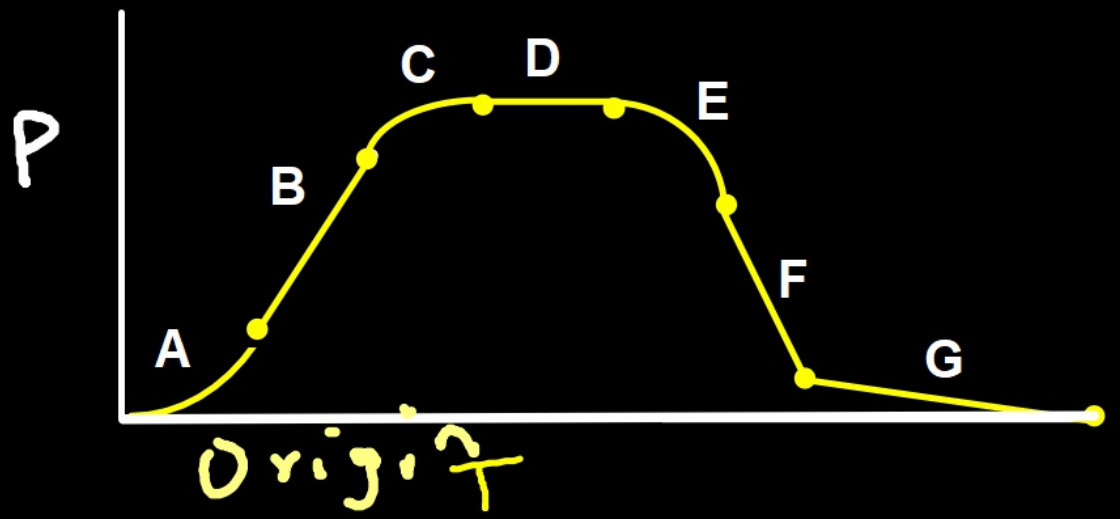

Speed Up Away
P
t
Slow Down Away
P
t
Horizontal: ←slow→
Vertical: ↑fast↓
Speed Up Towards
P
t
Slow Down Towards
P
t

I) Type of Motion	II) x-t sketch	III) motion map sketch
1) Still		
2) CV Away		
3) CV Towards		
4) Speed Up Away		
5) Slow Down Away		
6) Speed Up Towards		
7) Slow Down Towards		

Identify the regions where:

1. Velocity is constant B D F G
2. Velocity is changing A C E
3. + velocity A B C
4. - velocity E F G
5. Speeding Up A E
6. Slowing Down C
7. Moving Away from Origin
8. Moving Towards Origin

A, C, E = Curves



Finding total distance and displacement on a PT graph

Total Distance

200
+100
300 m

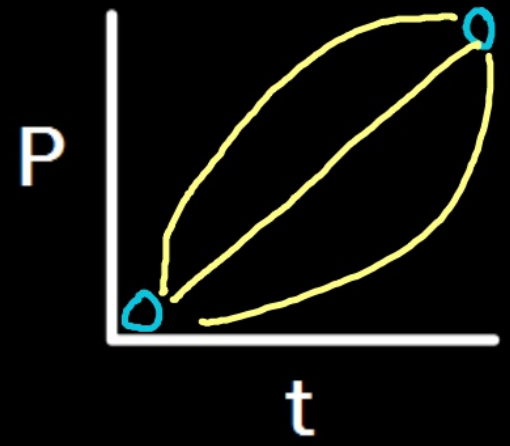
Displacement

-200
-100
100 m

What was its velocity in each stage?

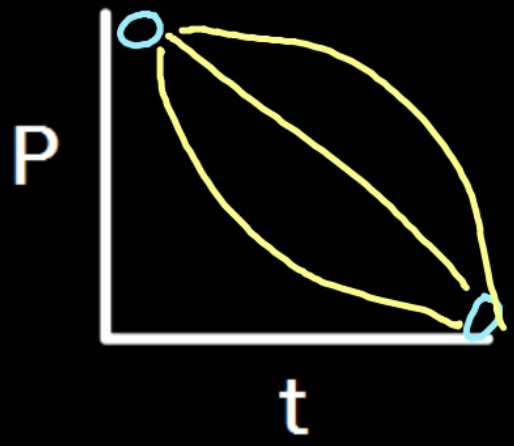
Slope!

+ Displacement



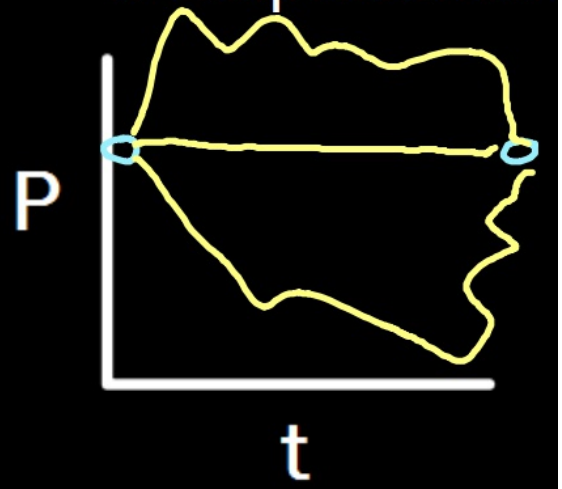
End pt is above start point

- Displacement



End pt is below start point

0 Displacemen



End pt = start pt