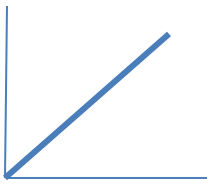
Physics Practice Quiz E,F,G,H /30 Name: ____KEY_____
Unit 2: Graph interpretation Date:_____ Period _____

Directions: Using each of the diagrams below, fill in the appropriate term for each blank.

Formula's:

1. In each of the graphs below describe velocity, acceleration and the area under the curve. 18 pt.

Dist



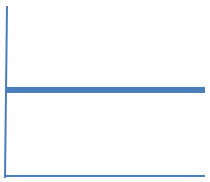
Time

Vel = _constant___

Acc = __zero_____

Area = ___N/A____

Dist



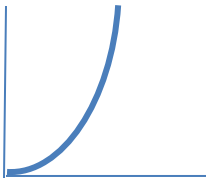
Time

Vel = _zero_____

Acc = __zero____

Area = ___N/A____

Dist



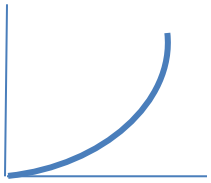
Time

Vel = _increasing__

Acc = _constant___

Area = ___N/A_____

Vel



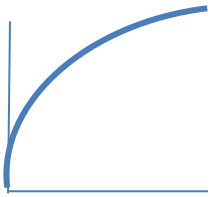
Time

Vel = _increasing_

Acc = _increasing_

Area = _distance__

Vel



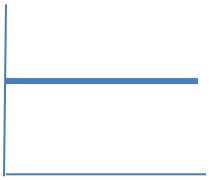
Time

Vel = _increasing_

Acc = _decreasing_

Area = __distance___

Vel



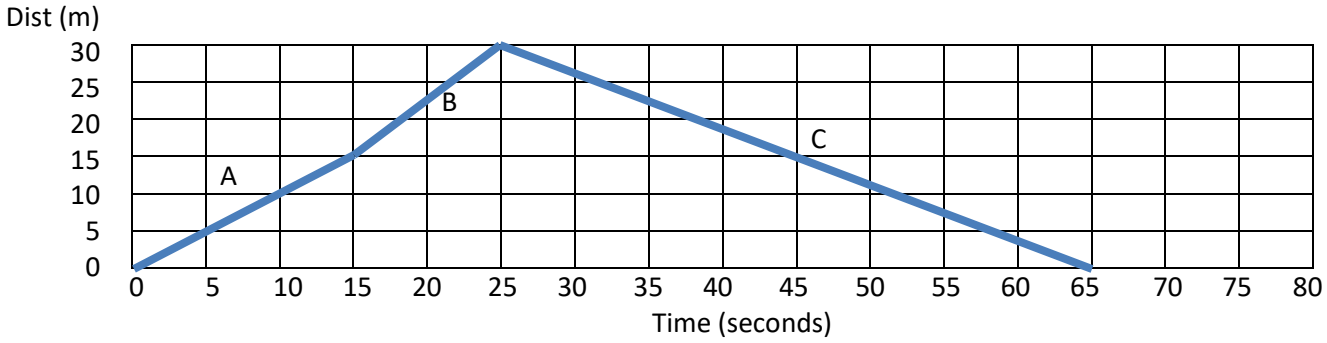
Time

Vel = _constant__

Acc = _zero_____

Area = _distance__

2. Using the position-time graph shown below, determine the velocity over each segment. Show all your work in determining the velocity. Circle final answers! 2 pts each.

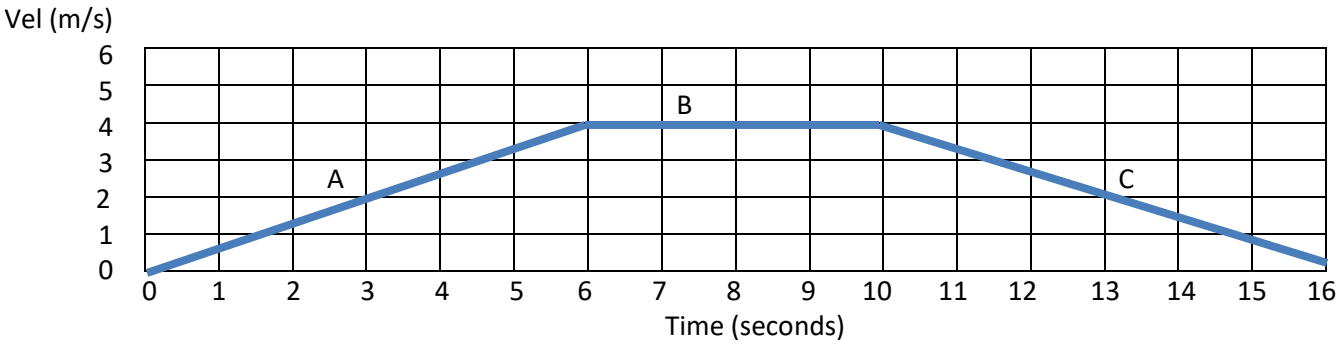


Segment A: **15m/15s = 1m/s**

Segment B: **15m/10s = 1.5 m/s**

Segment C: **-30m / 40s = -0.75 m/s**

3. Using the **Velocity**-time graph shown below, determine the **acceleration** over each segment. Show all your work in determining the **acceleration**. Circle final answers! 2 pts each.



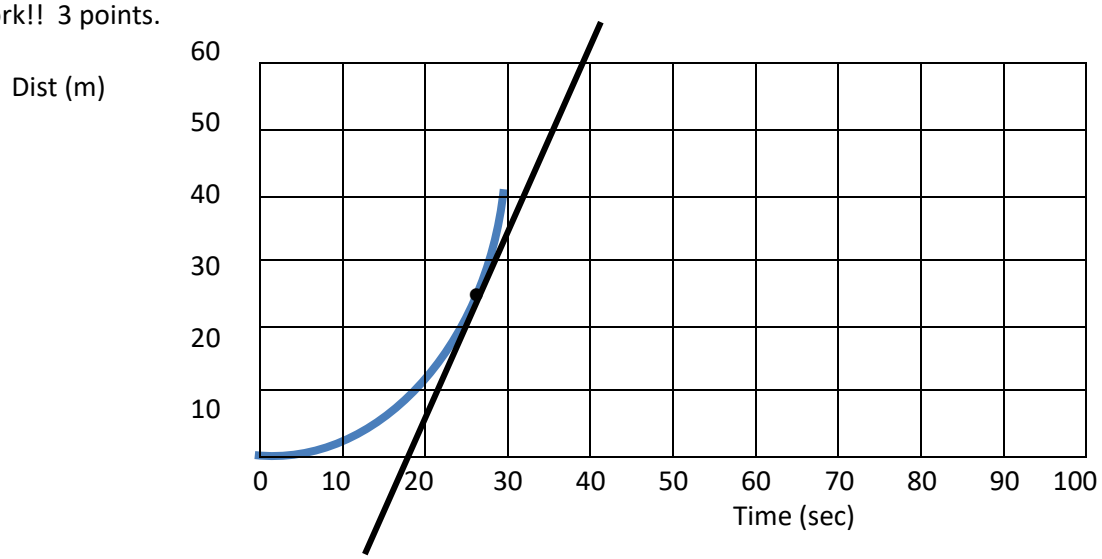
Segment A: **4 m/s / 6 seconds = 0.66667 m/s^2**

Segment B: **0 m/s / 4 seconds = 0 m/s^2**

Segment C: **-4 m/s / 6 seconds = - 0.666667 m/s^2**

Bonus:

In the following diagram determine the instantaneous velocity for the point indicated on the graph. Show all your work!! 3 points.



To solve, determine the slope of the straight line to determine the slope of the point on the graph. This will tell You the slope of the graph (velocity m/s) at the indicated point. The line is called a tangent line to the point on the graph.

$$\text{Slope} = \frac{\text{Rise}}{\text{Run}} = \frac{55\ \text{m}}{19\ \text{sec}} = 2.9\ \text{m/s}$$