

Name: _____

Period: _____

Date: _____

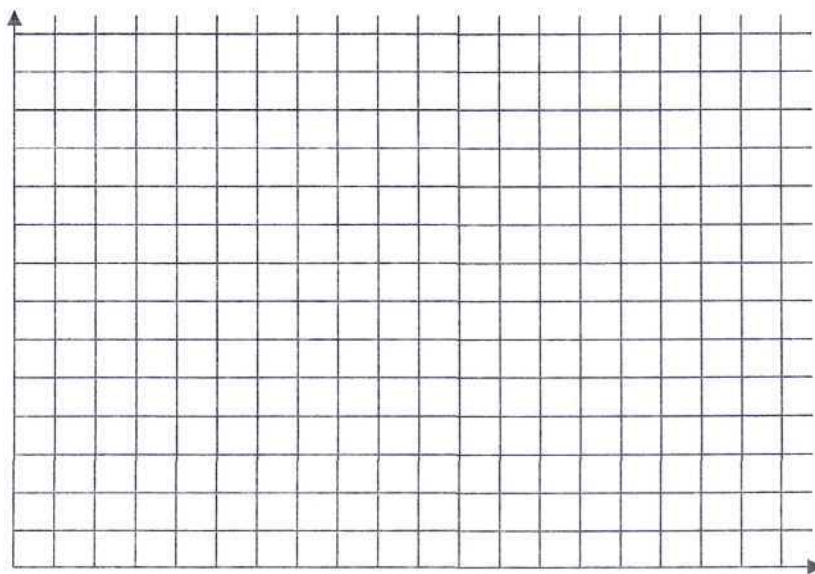
Graphing Worksheet

Use the given table to plot the displacement versus time graph for the motion of a biology teacher upon seeing a physics teacher. Use pencil.

Time (s)	Displacement (m)	Velocity (m/s)
0	0	Undefined
3.0	6.0	2.0
6.0	20.0	4.7
9.0	42.0	
12.0	72.0	
15.0	110.0	
18.0	156.0	
21.0	210.0	
24.0	272.0	
27.0	342.0	
30.0	420.0	

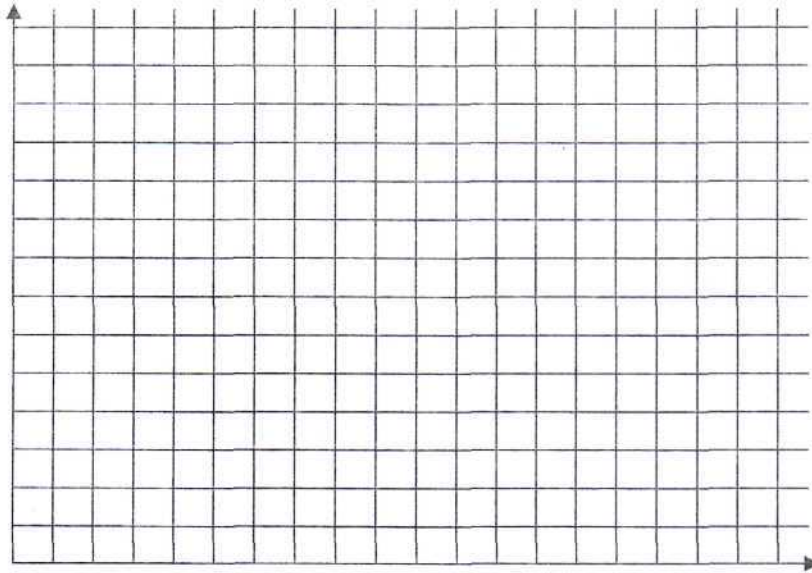
Complete the velocity column using $\Delta d/\Delta t$. Ex: v at 6.0 s is found as;
 $(20.0 \text{ m} - 6.0 \text{ m}) / (6.0 \text{ s} - 3.0 \text{ s}) = 4.7 \text{ m/s}$

Use the following grid to plot your graph. Include a title and labels.



- 1) What type of motion (UM or UAM) is indicated by this graph?
- 2) What is the shape of this graph?
- 3) Determine the velocity at 12.0 s, using the above graph and not your data points.
- 4) Determine the average velocity for the entire trip using the above graph.

5) Plot the velocity versus time graph on the following grid, with labels and a title.

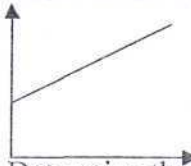


6) What shape is the v-t graph? How does it verify your answer to question #1?

7) Calculate the slope of the v-t graph. What physical quantity does the slope represent?

8) How much does the velocity increase by, each second?

9) If a v-t graph looks like the following graph, what does $t = 0$ indicate about the status of the object? (i.e. what is it doing?)



10) Determine the displacement of the object using the v-t graph and compare to your data table value of d for 30.0 s. (Why are they different?)