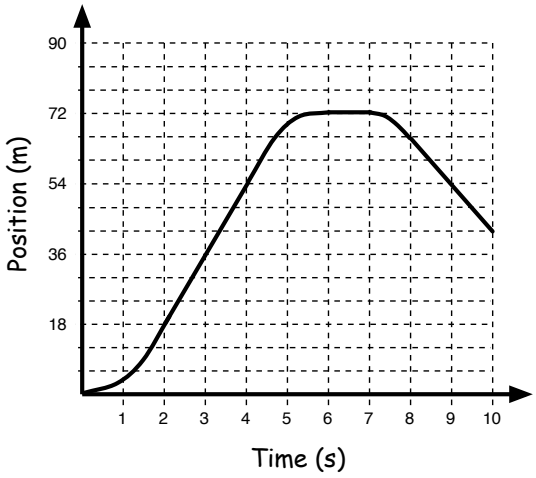
Name: Date:

Graphical Analysis of Motion

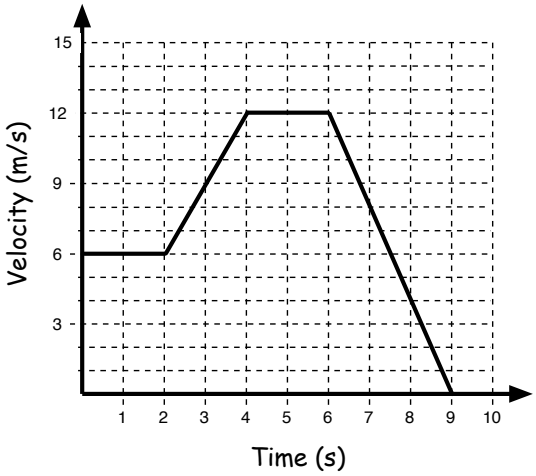
Part 1: Concepts:

1. The graph below shows the position vs time for an object in motion. Give a description of what the object is doing during each of the intervals listed in the table below:



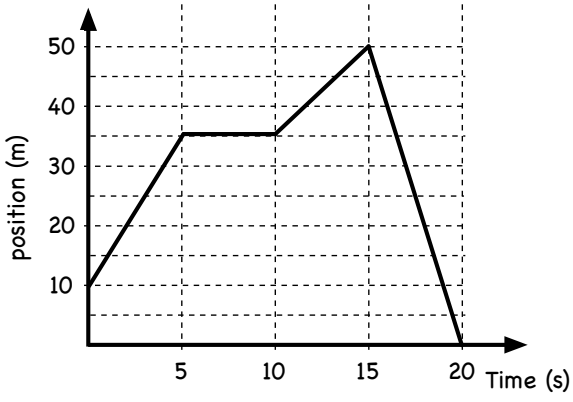
Region	Start Time (s)	End Time (s)	Description of Motion

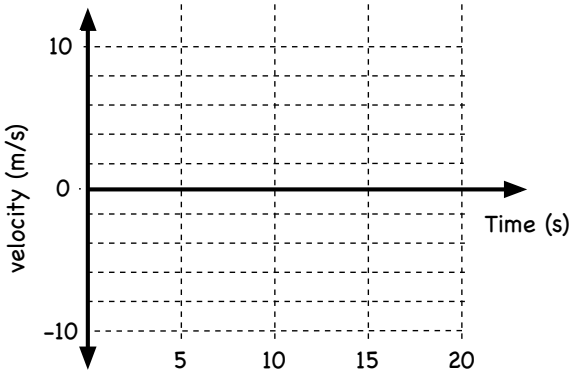
2. The graph below shows the velocity vs time for an object in motion. Give a description of what the object is doing during each of the intervals listed in the table below



Region	Start Time (s)	End Time (s)	Description of Motion

3. The graph below is a graph of position versus time. Use this graph to create a graph of velocity vs. time.





Name: Date:

Part 2: Practice Problems:

4. One of the best runners ever from the state of New Jersey was a man called Carl Lewis. In 1991 he set the record for the 100-m run with a time of 9.86 seconds. To get a better idea of his performance in this event his times to run each 10-meter section of the race were released to the public. Below is a chart that lists these times for each 10-meter interval. Use these charts to plot his position as a function of time. For an added challenge also make a graph of his velocity as a function of time.

Interval	Time for Interval (s)	Position (m)	Total Time (s)	Velocity (m/s)
1	1.88			
2	1.08			
3	0.92			
4	0.89			
5	0.84			
6	0.84			
7	0.84			
8	0.83			
9	0.85			
10	0.89