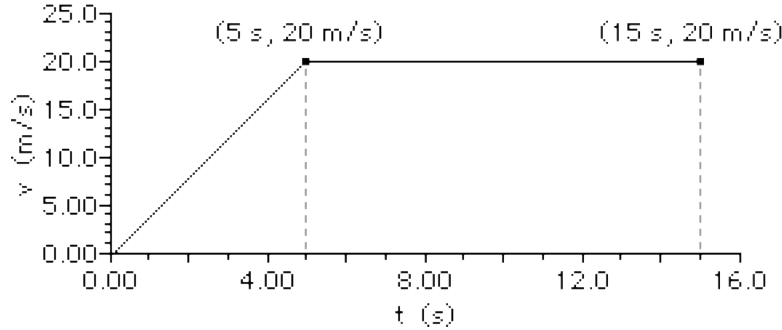


Kinematic Graphing - Mathematical Analysis

Study Lessons 3 and 4 of the 1-D Kinematics chapter at The Physics Classroom:

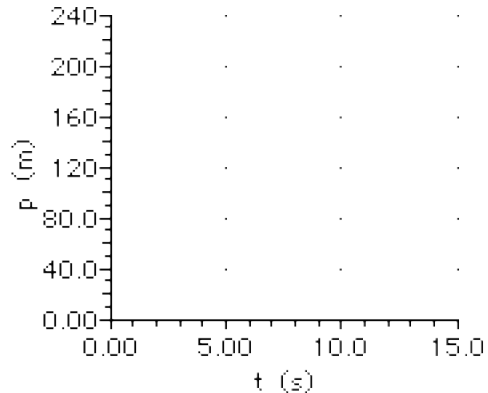
<http://www.physicsclassroom.com/Class/1DKin/1DKinTOC.html>

1. Consider the following graph of a car in motion. Use the graph to answer the questions.

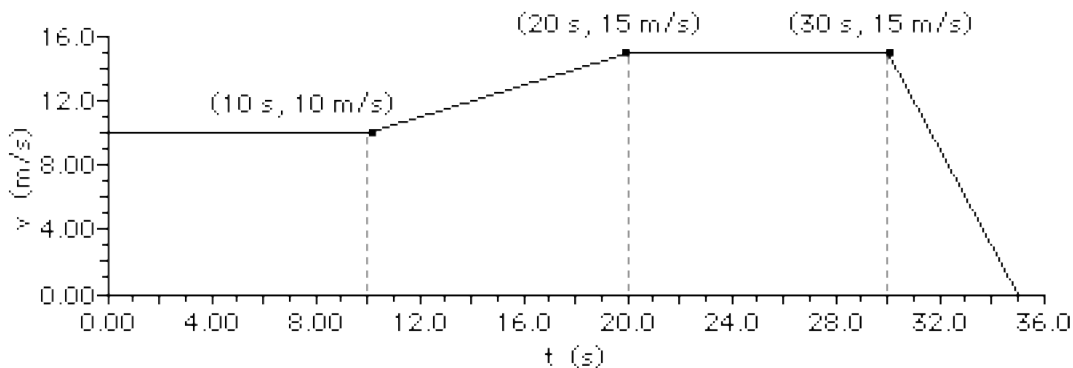


- Describe the motion of the car during each of the two parts of its motion.
 0-5 s: _____
 5-15 s: _____
- Construct a *dot diagram* for the car's motion.
- Determine the acceleration of the car during each of the two parts of its motion.
 0-5 s _____ 5-15 s _____
- Determine the displacement of the car during each of the two parts of its motion.
 0-5 s _____ 5-15 s _____
- Fill in the table and sketch position-time for this car's motion. Give particular attention to how you connect coordinate points on the graphs (curves vs. horizontals vs. diagonals).

Time (s)	Pos'n (m)
0	0
5	
10	
15	



2. Consider the following graph of a car in motion. Use the graph to answer the questions.



- a. Describe the motion of the car during each of the four parts of its motion.
- 0-10 s: _____
- 10-20 s: _____
- 20-30 s: _____
- 30-35 s: _____
- b. Construct a *dot diagram* for the car's motion.

c. Determine the acceleration of the car during each of the four parts of its motion. **PSYW**

0-10 s 10-20 s 20-30 s 30-35 s

d. Determine the displacement of the car during each of the four parts of its motion. **PSYW**

0-10 s 10-20 s 20-30 s 30-35 s

e. Fill in the table and sketch position-time for this car's motion. Give particular attention to how you connect coordinate points on the graphs (curves vs. horizontal vs. diagonal).

Time (s)	Pos'n (m)
0	0
5	
10	
15	
20	
25	
30	
35	

