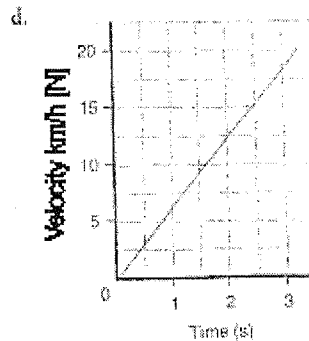
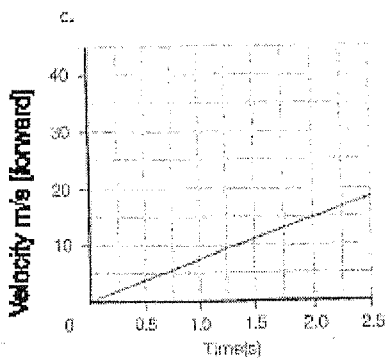
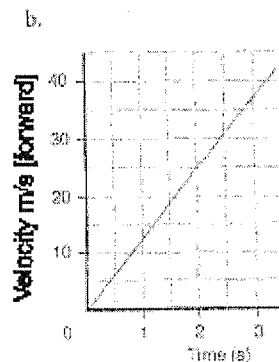
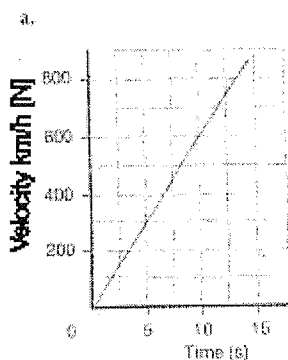


## ACCELERATION PROBLEMS

Answer all questions on a separate sheet of paper. Show all your work.

1. A rower can accelerate her boat from rest to 3 m/s [right] in 6 seconds. What is the acceleration of the boat?
2. An airplane starting from rest accelerates at 200 km/h [N] in 20 seconds. What is the acceleration of the airplane?
3. A speedboat takes about 5.0 s to increase its speed from 10 km/h [West] to 110 km/h [West]. What is its acceleration?
4. A cyclist increases her speed from 3.4 m/s [forward] to 4.8 m/s [forward] in a time of 4.5 seconds. What is her acceleration?
5. A hockey puck, travelling 13 m/s [S] is stopped by the goalie in 0.3 seconds. What is the acceleration of the hockey puck?
6. Determine the acceleration (slope) on each of the following graphs. Remember to include correct units.



7. A remote control racecar moving at 7 m/s [forward] at the start of a straightaway accelerates to a velocity of 25 m/s [forward] in 3 seconds. What is the acceleration of the racecar?
8. The graph below shows the motion of a car moving in a straight line.
- During which time interval does the car accelerate? Decelerate?
  - What type of motion occurs from 20 s to 30 s?
  - What is the acceleration of the car from 20 s to 30 s?
  - Calculate the acceleration from 30 s to 40 s.

