



I. The position of an object as a function of time is shown in the diagram at the left.

1. What is the velocity during the first second?
2. What is the average velocity during the first 7 seconds?
3. What is the velocity during the second second?
4. What is the velocity at  $t = 3$  seconds?
5. What is the velocity at  $t = 5$  seconds?
6. What is the displacement during the first 6 seconds?
7. What is the distance traveled during the first 7 seconds?

II. The velocity of an object as a function of time is shown in the diagram at the right.

8. How far does the object go during the first second?
9. How far does the object go during the 2nd second?
10. What is the acceleration at  $t = 1.5$  second?
11. What is the acceleration at  $t = 3.0$  seconds
12. What is the acceleration at  $t = 5.0$  seconds
13. How far did the object go from  $t = 4$  to  $t = 7$  sec?

III. Plot the following graphs

1. A velocity vs time graph of the displacement-time graph at left.
2. A position vs time graph of the velocity-time graph at right.

CHAPTER 2 Quiz

1. A ball started rolling on a level surface at a velocity of  $-36 \text{ m/s}$ . Four seconds later it came to rest. Calculate:
  - a. the average velocity of the ball during the 4 seconds and
  - b. the acceleration

a. \_\_\_\_\_

b. \_\_\_\_\_
  
2. A ball rolls down a long inclined plane and has a velocity of  $500 \text{ cm/sec}$  at the end of two seconds. Calculate:
  - a. its acceleration,
  - b. the distance it has covered in 2 seconds, and
  - c. the distance it would cover in 4 seconds.

a. \_\_\_\_\_

b. \_\_\_\_\_

c. \_\_\_\_\_
  
3. An automobile is traveling  $70 \text{ km/hr}$ . The, brake is applied and the car comes to stop after it has traveled 70 meters. Calculate:
  - a. the acceleration, and
  - b. how long it takes to stop the car.

a. \_\_\_\_\_

b. \_\_\_\_\_
  
4. A ball starting from rest rolls down an inclined plane and has a uniform acceleration of  $5 \text{ cm/sec/sec}$ . Calculate:
  - a. how long it will take a ball to acquire a velocity of  $60 \text{ cm/sec}$ ,
  - b. the average velocity during the time determined in 'a',
  - c. the distance traveled during the same time interval,
  - d. the distance the ball rolled during the last second of travel, and
  - e. the average velocity of the ball during the last 3 seconds of travel.

a. \_\_\_\_\_

b. \_\_\_\_\_

c. \_\_\_\_\_

d. \_\_\_\_\_

e. \_\_\_\_\_