

## Velocity Graphs

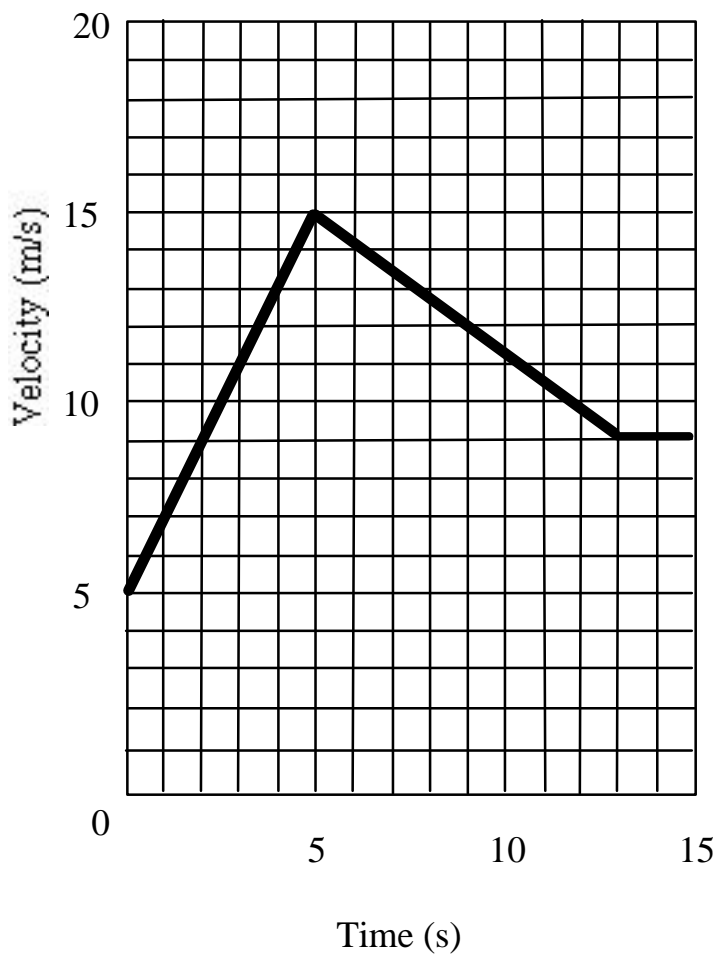
**Problem:**

To practice understanding the motion of an object by obtaining information from a velocity-time graph and then drawing the corresponding position-time graph and acceleration-time graph.

**Procedure:**

Use the graph below to answer the following questions:

### Velocity vs. Time



**Summing Up:**

1. What is the velocity at  $t = 2$  s?
2. What is the velocity at  $t = 5$  s?
3. What is the acceleration at  $t = 2$  s?

4. What is the acceleration at  $t = 6$  s?
5. How far has the object traveled at the end of 2 s?
6. How far has the object traveled at the end of 5 s?
7. How far has the object traveled at the end of 8 s?
8. When is the object traveling with the greatest velocity?
9. When does the object have the greatest acceleration?
10. What is the object's velocity at  $t = 9$  s?
11. What is the object's acceleration at  $t = 9$  s?
12. At what time is the object farthest from the starting point?
13. How far does the object travel between  $t = 5$  s and  $t = 9$  s?
14. On the axes on below, draw a graph of the object's displacement vs. time.

**Procedure:**

