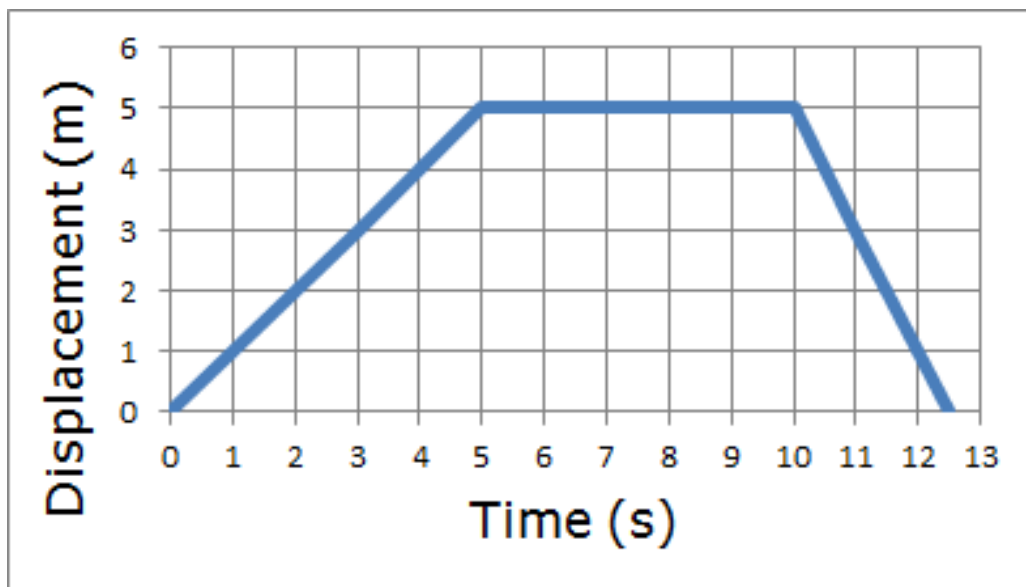


One-Dimensional Kinematics Concept Review

Use your notes and other resources to assist in answering the following the questions/scenarios.

1. When is it appropriate to use the equation $v = x / t$?
2. What is the relationship between the signs of displacement and velocity?
3. How does displacement differ from distance?
4. How does speed differ from velocity?
5. Define acceleration.
6. How can the signs of velocity and acceleration be used to determine if the object is accelerating or decelerating?
7. An object moves in the positive direction. If the object is speeding up, then its acceleration is ...
8. An object moves in the negative direction. If the object is slowing down, then its acceleration is ...
9. Consider an object thrown straight up in the air. A) Discuss the displacement, velocity, and acceleration on the way up. B) Discuss each quantity at the peak of its motion. C) Discuss each on the way back down.
10. The slope of a displacement-time graph tell us ...
11. Sketch a displacement-time graph that demonstrates constant velocity.
12. Sketch a displacement-time graph that demonstrates an object moving in the positive direction with a positive acceleration.
13. Sketch a displacement-time graph that demonstrates an object moving in the positive direction with a negative acceleration.
14. How do you use a displacement-time graph to find an object's instantaneous velocity?
15. The slope of a velocity-time graph tell us ...
16. Sketch a velocity time graph that shows the following. A) Increasing positive velocity B) constant velocity C) decreasing positive velocity.
17. The area of a velocity-time graph tells us ...
18. What is the correct way to determine the slope of a linear segment on a graph?
19. Describe the motion of each segment in the graph below:



20. Sketch a velocity time graph for the motion represented above. Label the axis with the appropriate numbers. Show all work for the numbers.