

Chapter 2 Guided Reading Section 2.1

1. _____ is a variable that describes an object's location relative to an origin.
2. The origin is the place where the position has been given a value of _____.
3. What is displacement?
4. A displacement of **+20 cm** means the object moves _____ the origin.
5. A displacement of **-20 cm** means the object moves _____ the origin.
6. Velocity tells you both an object's _____ and its _____.
7. What does constant velocity mean?
8. Average velocity is the total _____ divided by the total _____.
9. Instantaneous velocity describes an object's velocity at one specific _____.
10. _____ of _____ is an object or system assumed to be at rest.
11. What is relative velocity?
12. Define acceleration.
13. Write the equation used to calculate acceleration.
14. What are the SI units for acceleration?

Guided Reading Section 2.2

15. The slope of a line is the ratio of the _____ to the _____.
16. The "rise" of a graph represents the _____ change.
17. The "run" of a graph represents the _____ change.

18. A position vs. time graph can tell you whether an object's _____ is constant or changing.
19. If an object moves with constant velocity, what will its position vs. time graph look like?
20. If two position vs. time graphs are straight lines, but one is steeper than the other, which object is moving faster?
21. If the slope of a position vs. time graph changes, what does that indicate?
22. What shape does a position vs. time graph have when an object is accelerating?
23. Why does a car slowing to a stop produce a curved position vs. time graph instead of a straight line?

Guided Reading Section 2.3

32. On a velocity vs. time graph, velocity is plotted on the _____ axis.
33. On a velocity vs. time graph, time is plotted on the _____ axis.
34. How is constant velocity shown on a velocity vs. time graph?
35. The slope of a velocity vs. time graph represents the object's _____.
36. On a velocity vs. time graph, the "rise" represents the change in _____.
37. The "run" represents the change in _____.
38. The area under a velocity vs. time graph represents the object's _____.
39. Why must a velocity vs. time graph include negative velocities?
40. Explain the difference between displacement and velocity as shown on a velocity vs. time graph.