

6. Suppose motion toward the east is positive(+). Is the acceleration positive, negative, or zero for each of the following situations?
- (a) slowing down while travelling east
 - (b) travelling with a constant velocity west
 - (c) increase in speed while travelling east
 - (d) increase in speed while travelling west
 - (e) decrease in speed while travelling west

Understanding Key Ideas

7. Given the following data, calculate the change in velocity (v) for the following time intervals. Let motion to the north represent positive (+) velocity.
- (a) 0 s - 5 s
 - (b) 5 s - 10 s
 - (c) 10 s - 15 s
 - (d) 15 s - 20 s
 - (e) 20 s - 25 s

Time (s)	Velocity (m/s [N])
0	0
5	8
10	12
15	12
20	15
25	9

8. (a) If the acceleration is in the same direction as the velocity, what happens to the speed of an object?
 (b) If the acceleration is in the opposite direction to the velocity, what happens to the speed of an object?
9. A car travelling forward at 25.0 m/s stops and backs up at 4.0 m/s.
- (a) What is the car's change in velocity?
 - (b) What is the direction of the car's acceleration?

10. Describe the direction of the acceleration for each of the following situations.



A Sliding in to home plate



B Starting the race