

Homework: SU/SD

1. Answer the following questions based on the graph. Provide a brief explanation how you could tell.

a) At what times, if any does the object have a positive acceleration and a negative velocity?

b) At what times, if any does the object have a negative acceleration and a positive velocity?

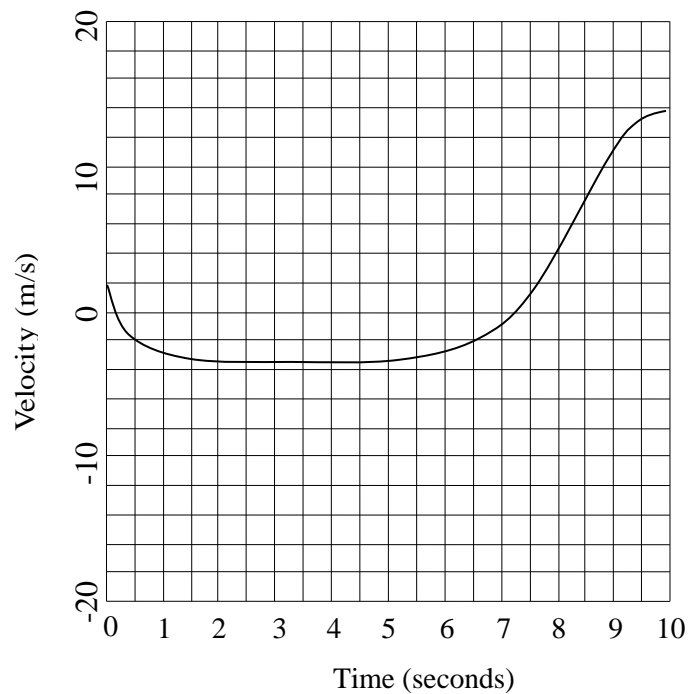
c) At what times, if any, was the acceleration zero?

d) At what times, if any, was the object speeding up?

e) At what times, if any, was the object slowing down?

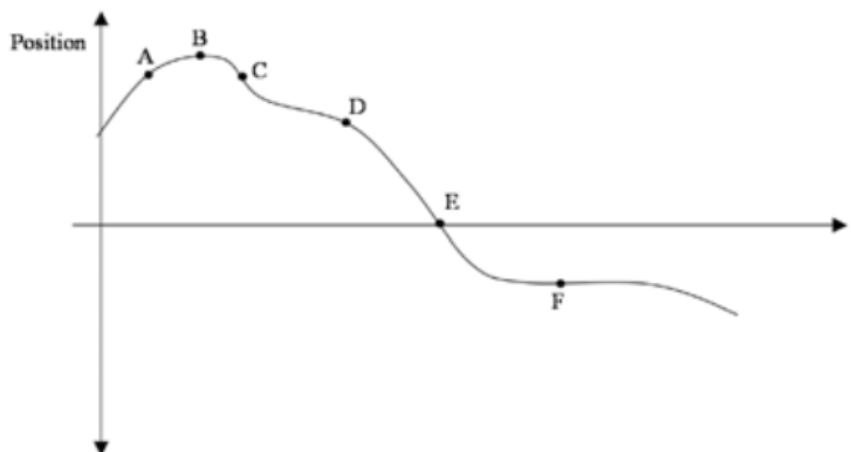
f) At what times, if any, did the object sit still for an extended period of time?

g) Overall, is the motion in the graph an example of uniform or nonuniform acceleration?



2. Answer the following questions based on the graph. Provide a brief explanation how you could tell. At which of the lettered points on the graph below:

a) is the motion slowest?



b) is the object speeding up?

c) is the object slowing down?

d) is the object turning around?

3. A car's velocity changes from +40 km/h to +30 km/h in 3 seconds. Is the acceleration positive or negative? Find the acceleration.

4. At the beginning of a half-hour time period, a snail is moving at -3.0 mm/s. The snail then slows down, turns around and starts heading back in the opposite direction at +1.0 mm/s. Is the acceleration positive or negative? Find the acceleration.