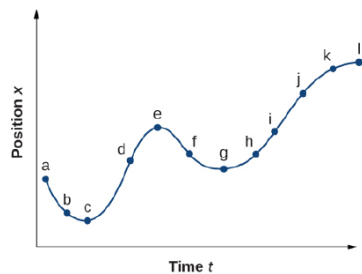


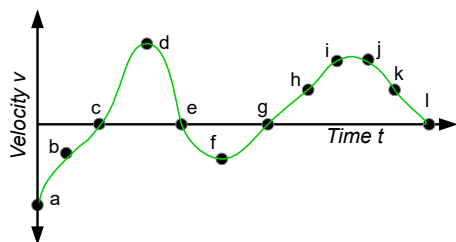
Chapter 3 Problem 46 †



Solution

a) Sketch a graph of velocity versus time for the given position graph.

A rough sketch of the slopes at each time are given in the following figure.



b) Where is the velocity the greatest positive value?

t_d seems to have the largest positive slope followed by t_i and t_j .

c) Where is the velocity zero?

Where the tangent is horizontal, the velocity is zero. This corresponds to t_c , t_e , t_g and t_l .

d) Where is the velocity negative?

This corresponds to when the slope is negative, which is at t_a , t_b , and t_f .

†Problem from University Physics by Ling, Sanny and Moebs (OpenStax)