

6. (12 points) An object moves in a straight line. Its distance from the origin (in feet) after t seconds is given by $s(t)$ (see graph below).

- (i) When does the object have a velocity of $0 \frac{\text{ft}}{\text{sec}}$? $T = 1, 3, 5, 7, 9$
- (ii) When does the object have an acceleration of $0 \frac{\text{ft}}{\text{sec}^2}$? $T = 2, 4, 6, 8, 10$
- (iii) When does the object simultaneously have positive acceleration and negative velocity? $[2, 3]$ $[6, 7]$ $[10, 11]$
- (iv) Draw a line segment on the graph which has as its slope the average velocity of the object during the time interval from 1 to 3 seconds.

