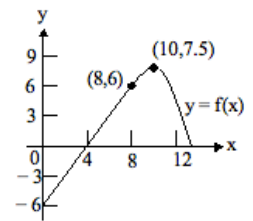


$f$  is the differentiable function whose graph is shown in the figure to the right. The position at time  $t$  (sec) of a particle moving along a coordinate axis is  $s = \int_0^t f(x) dx$  meters. Use the graph to answer the questions.



1. What is the particle's velocity at time  $t=4$ ?
2. Is the acceleration of the particle at time  $t=4$  positive or negative?
3. What is the particle's position at time  $t=4$ ?
4. What does the particle pass through the origin?
5. Approximately when is the acceleration zero?

#### Answers

1. 0 m/s
2. positive
3. -12 meters
4. 8 sec
5. 10 sec