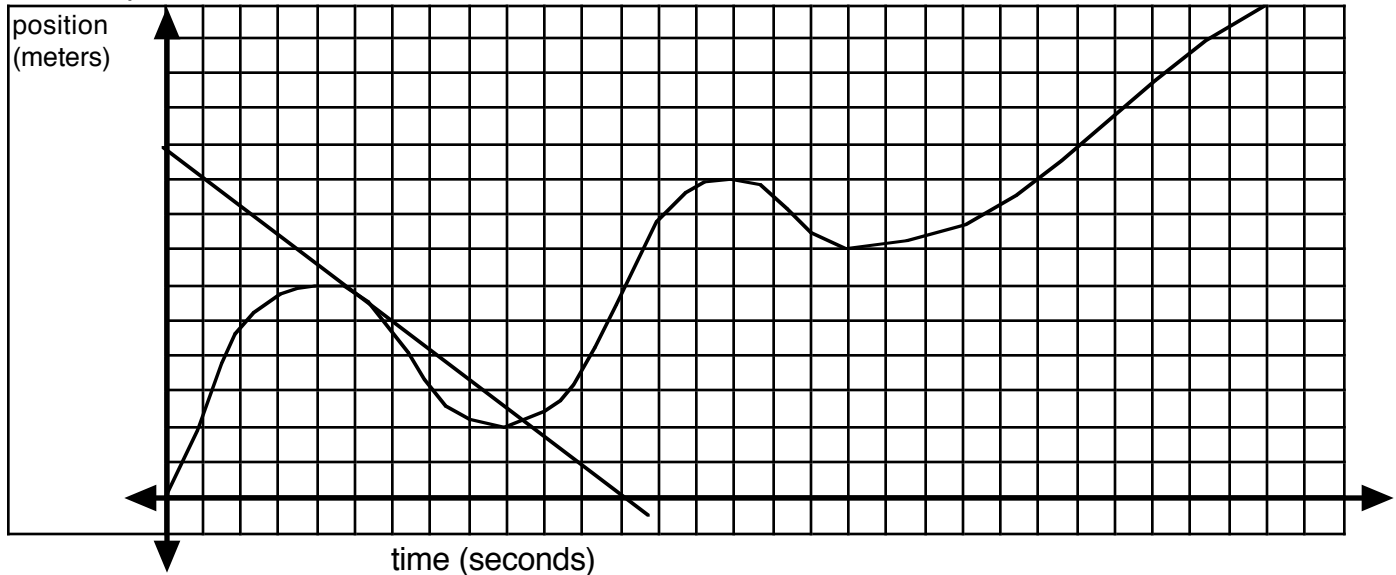


Practice problems



1. Calculate the average speed of the object over each interval.

a) 1 s to 10 s

b) 2 s to 8 s

c) 3 s to 7 s

d) 4 s to 6 s

$$\frac{d = 2 \text{ to } d = 2.5}{.5/9} = .0556 \text{ m/s}$$

$$\frac{d = 2 \text{ to } d = 2.2}{.2/6} = .033 \text{ m/s}$$

$$\frac{d = 5.7 \text{ to } d = 3}{-2.7/4} = -.675 \text{ m/s}$$

$$\frac{d = 6 \text{ to } d = 4.5}{-1.5/2} = -.75 \text{ m/s}$$

2. Find the instantaneous speed of the object at 5 seconds.

Approximately -0.8 m/s

3. Draw a representation of that speed on the graph.

It is the tangent line, with a slope of approximately 4/5

4. Write a limit representing the instantaneous speed.

$$\lim_{\Delta x \rightarrow 0} \frac{\Delta y}{\Delta x}$$