

Name: Solutions

Quiz 1

Circle: 9 AM, 10 AM, 11 AM

1. The position of a particle at time t is given by $s(t) = t^2 + t + 3$. Find the average velocity of $s(t)$ between $t = 0$ and $t = 1$. (Show your work).

Velocity = rate of change of position

So the average velocity on $[0, 1]$ is

$$\frac{s(1) - s(0)}{1 - 0} = \frac{1^2 + 1 + 3 - (0^2 + 0 + 3)}{1} = \frac{5 - 3}{1} = \boxed{2}$$