

*Answer each of the following questions.*

For the function given by  $s(t) = t^2$ :

1. find the most simplified expression you can for the average velocity of the ball on the interval  $[1, 1 + h]$

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2. Use your result from part (1) to compute the average velocity on  $[0.9, 1]$  and to estimate the instantaneous velocity at  $t = 1$

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