

4. Average velocity on  $[2, 2 + h]$  is

$$\frac{(2 + h)^2 - 4}{(2 + h) - 2} = \frac{4 + 4h + h^2 - 4}{h} = \frac{4h + h^2}{h} = 4 + h.$$

As  $h$  approaches 0 this average velocity approaches 4 m/s