

5.1

(7) $v = \frac{1}{1+t}$ $0 \leq t \leq 1$ $\Delta t = 0.2$

$$\text{upper estimate} = \frac{1}{1+0}(0.2) + \frac{1}{1+0.2}(0.2) + \frac{1}{1+0.4}(0.2) + \frac{1}{1+0.6}(0.2) + \frac{1}{1+0.8}(0.2) \approx 0.75$$

$$\text{lower estimate} = \frac{1}{1+0.2}(0.2) + \frac{1}{1+0.4}(0.2) + \frac{1}{1+0.6}(0.2) + \frac{1}{1+0.8}(0.2) + \frac{1}{1+1}(0.2) \approx 0.65$$

$$\frac{0.65 + 0.75}{2} = \boxed{0.70 \text{ meters}}$$