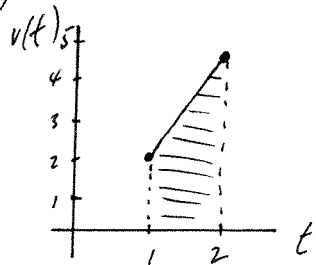


5.3
16

Suppose $v(t) = 3t - 1$ for $1 \leq t \leq 2$.

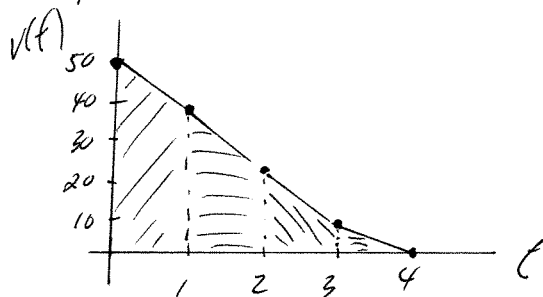


The distance traveled by the object with velocity function $v(t) = 3t - 1$ between $t = 1$ and $t = 2$ is given by the area of the indicated trapezoidal region.

So, the distance we seek is $\frac{1}{2}(1)(2+5) = \underline{\underline{3.5}}$

5.3
26

time (sec)	0	1	2	3	4	5
Velocity (ft/sec)	50	40	25	10	0	



We can approximate the distance traveled in the 4 second interval by summing the areas of the four trapezoids. So, the distance we seek is

approximately $\frac{1}{2}(1)(50+40) + \frac{1}{2}(1)(40+25) + \frac{1}{2}(1)(25+10) + \frac{1}{2}(1)(10+0)$
 $\approx \frac{1}{2} [90 + 65 + 35 + 10]$
 $\approx \frac{1}{2} [200]$
 $\approx \underline{\underline{100 \text{ feet}}}$