



## Lesson 1.5 – Rectilinear Motion

1. An ant is walking along a wire with velocity  $v(t) = 2$  in/s on the time interval  $[0, 2]$ ,  $v(t) = -t + 4$  in/s on the time interval  $[2, 5]$ , and  $v(t) = -1$  in/s on the time interval  $[5, 7]$ .
  - (a) Sketch the graph of the ant's velocity on the interval  $[0, 7]$ .
  - (b) Use geometry to find the ant's displacement on the interval  $[0, 7]$ .
  - (c) Use geometry to find the total distance traveled on the interval  $[0, 7]$ .