

7.1 The Integral as Net Change

Displacement is the change in position (could be positive, negative, or zero).

Total Distance is always non – negative → think of adding up all of the distances (right or left) traveled.

For problems 1 – 4, determine

(a) when the particle is moving to the right, to the left, and stopped

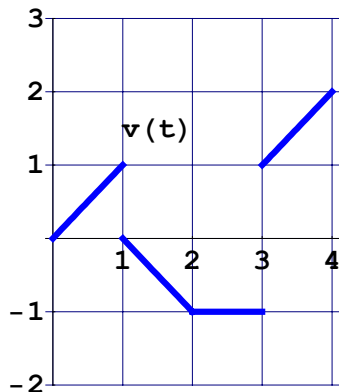
(b) the particle's displacement for the given time interval

(c) the total distance travelled by the particle

1. $v(t) = 4 \cos 2t \quad 0 \leq t \leq \frac{2\pi}{3}$

2. $v(t) = \sqrt{t+4} \quad 0 \leq t \leq 5$

3.



4.

