Physics
Quiz # 2

Date Given: April 14, 2022
Date Due: April 21, 2022

Q1. (1 point) The area under the velocity-time curve is the:

(a) Acceleration.

(b) Displacement.

(c) Mass.

(d) Force.

Q2. (1 point) The slope of the velocity versus time curve is the:

(a) Inverse of the acceleration.

(b) Acceleration.

(c) Work done.

(d) Displacement.

Q3. (1 point) For rectilinear motion the relationship between displacement, s, velocity, v, acceleration, a, and time, t, $s = s_0 + v_0 t + (1/2)at^2$ is valid:

(a) Only if he acceleration and the initial velocity are in the same direction.

(b) Only if the acceleration is constant.

(c) For all forms of acceleration.

(d) Only if the initial velocity is zero.

Q4. (2 points) The position of the particle is given by $s(t) = (2t^2 - 8t + 6)$ m, where t is in seconds. Determine the time when the velocity of the particle is zero, and (assuming that the motion starts at $t = 0$ s) the total distance traveled by the particle when $t = 3$ s.

Q5. (1 point) Determine v at $s = 2$m if $v = 1$m/s at $s = 0$.

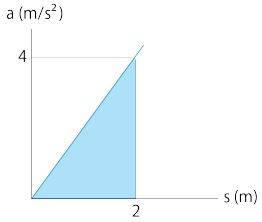

Figure 1: Illustration to question Q5.