Velocity Graph Physics C



An object moves along a one dimensional track as shown in the graph above.

For the first 4 seconds (t = 0 – 4) the velocity is given by the function y = x2 – 4x + 6.

From t = 4 – t = 7, the velocity function is given by the equation y = 2x – 1.

Determine the displacement of the object during each of the listed intervals as well as for the 7 seconds depicted on the graph.

t = 0 – 4 dx x3/3 – 2x2 + 6x │ = 13.3 m

t = 4 – 7 dx x2 – x │ = 30 m

Net Displacement = 43.3 m