

IB Calculus Problem 014

The velocity v , in ms^{-1} , of a particle moving in a straight line is given by $v = e^{3t-2}$, where t is the time in seconds.

- A. Find the acceleration of the particle at time $t = 1$.
- B. For what value of t does the particle have a velocity of $22.3 ms^{-1}$?
- C. Find the distance travelled during the first second.