

- 1 A particle P of mass 1 kg is moving along a straight line against a resistive force of magnitude $\frac{10\sqrt{v}}{(t+1)^2}\text{ N}$, where $v\text{ ms}^{-1}$ is the speed of P at time $t\text{ s}$. When $t = 0$, $v = 25$.

Find an expression for v in terms of t .

[5]

[illegible]