

find and fix the error.

A car is travelling at 25 m/s. The driver hits the brakes, causing an acceleration of -5.0 m/s^2 . How far does the car travel while coming to a stop?

$$v_i = 25 \text{ m/s}$$

$$a = -5.0 \text{ m/s}^2$$

$$v_f \overset{0}{=} v_i + at \Rightarrow -v_i = at \Rightarrow t = -\frac{v_i}{a}$$

$$t = -\frac{25 \text{ m/s}}{-5 \text{ m/s}^2} = 5.0 \text{ s}$$

$$x = vt = (25 \text{ m/s})(5.0 \text{ s}) = \boxed{125 \text{ m}}$$