\[ u_0 = 8 \text{ m/s at } t = 0 \]

Note: \( a_x = \text{const} \)

So:

\[ u(t=4) = u_0 + \int_0^4 a_x \, dt \]

\[ = u_0 + \text{area \((t=0 \to 4)\)} \]

\[ = u_0 + \frac{1}{2} (4)(4) \]

\[ u = 16 \text{ m/s} \]