1. An electron has a constant acceleration of +2.9 m/s^2. At a certain instant its velocity is +8.7 m/s. What is its velocity (a) 1.6 s earlier and (b) 1.6 s later?

$a = 2.9\frac{m}{s^2}$ $v_0 = 8.7\frac{m}{s}$ $\Delta t = 1.6\,s$	*Solution.* The projection of the velocity of an electron is $v_x = v_0 + a\,t$. The projection of the velocity at time $t = -\Delta t$ and $t = \Delta t$ are $v_1 = v_0 - a \cdot \Delta t$, $v_2 = v_0 + a \cdot \Delta t$.
$v_1, v_2 - ?$	

Let check the dimension: $[v_1] = [v_2] = \frac{m}{s} - \frac{m}{s^2} \cdot s = \frac{m}{s}$.

Let evaluate the quantity:

$$v_1 = 8.7 - 2.9 \cdot 1.6 = 4.06\left(\frac{m}{s}\right), \quad v_2 = 8.7 + 2.9 \cdot 1.6 = 13 \cdot 34\left(\frac{m}{s}\right).$$

Answer: $4.06\frac{m}{s}$, $13.34\frac{m}{s}$.

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