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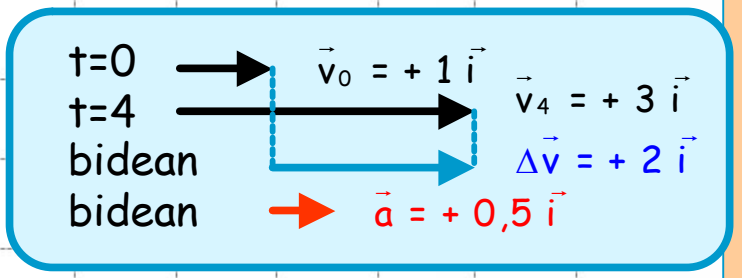
Zinematika

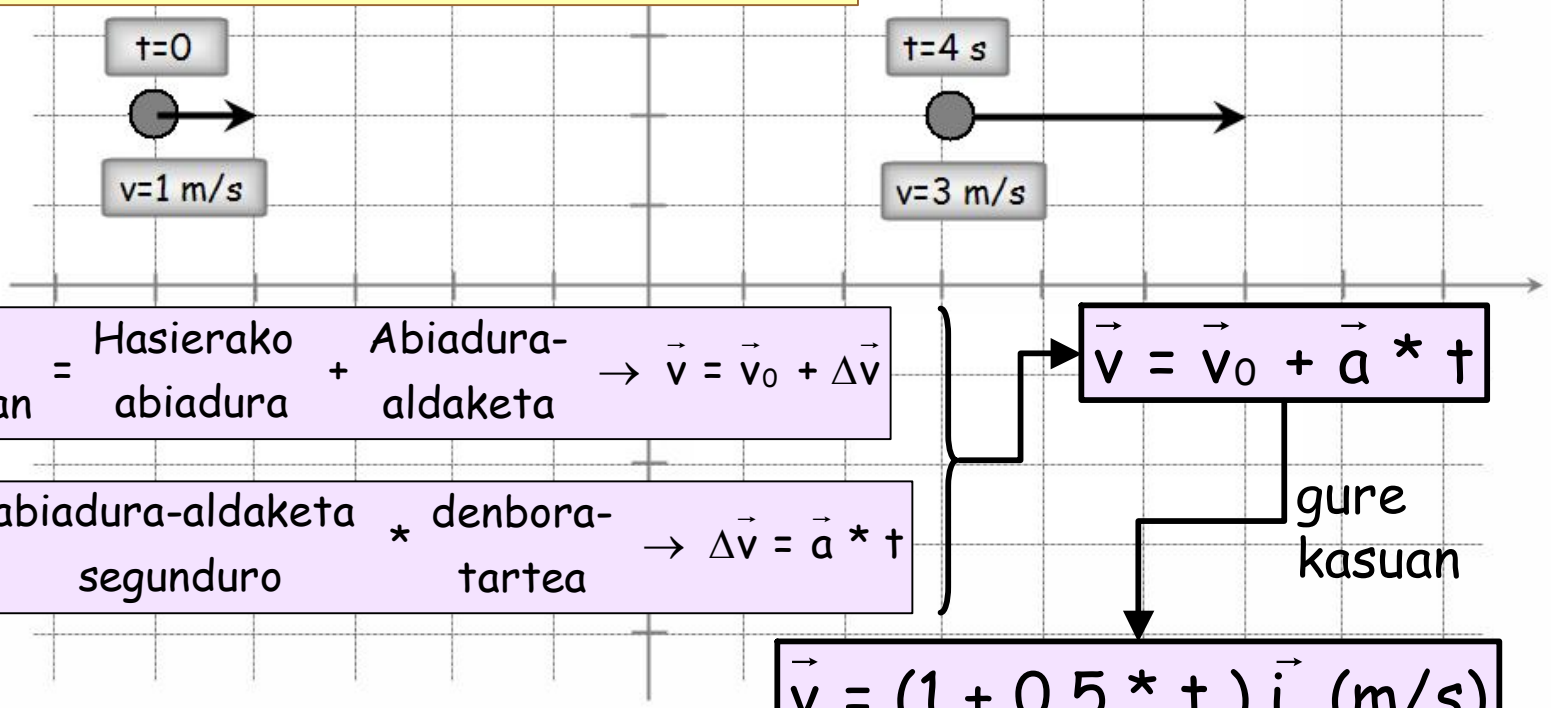
Abiadura-aldaktea = bukaerako abiadura - hasierako abiadura

$\Delta\vec{v} = \vec{v}_4 - \vec{v}_0 = (+3\,\vec{i}) - (+1\,\vec{i}) = +2\,\vec{i}\ (m/s)$

Azelerazioa = Abiadura-aldaketa segunduro = Abiadura-aldaketa denbora

$\vec{a} = \dfrac{+2\,\vec{i}\ (m/s)}{4\ s} = +0{,}5\,\vec{i}\ (m/s^2)$





Abiadura edozein unetan = Hasierako abiadura + Abiadura-aldaketa $\rightarrow \vec{v} = \vec{v}_0 + \Delta\vec{v}$

Abiadura-aldaketa = abiadura-aldaketa segunduro * denbora-tartea $\rightarrow \Delta\vec{v} = \vec{a} * t$

$\vec{v} = \vec{v}_0 + \vec{a} * t$

gure kasuan

$\vec{v} = (1 + 0{,}5 * t)\,\vec{i}\ (m/s)$

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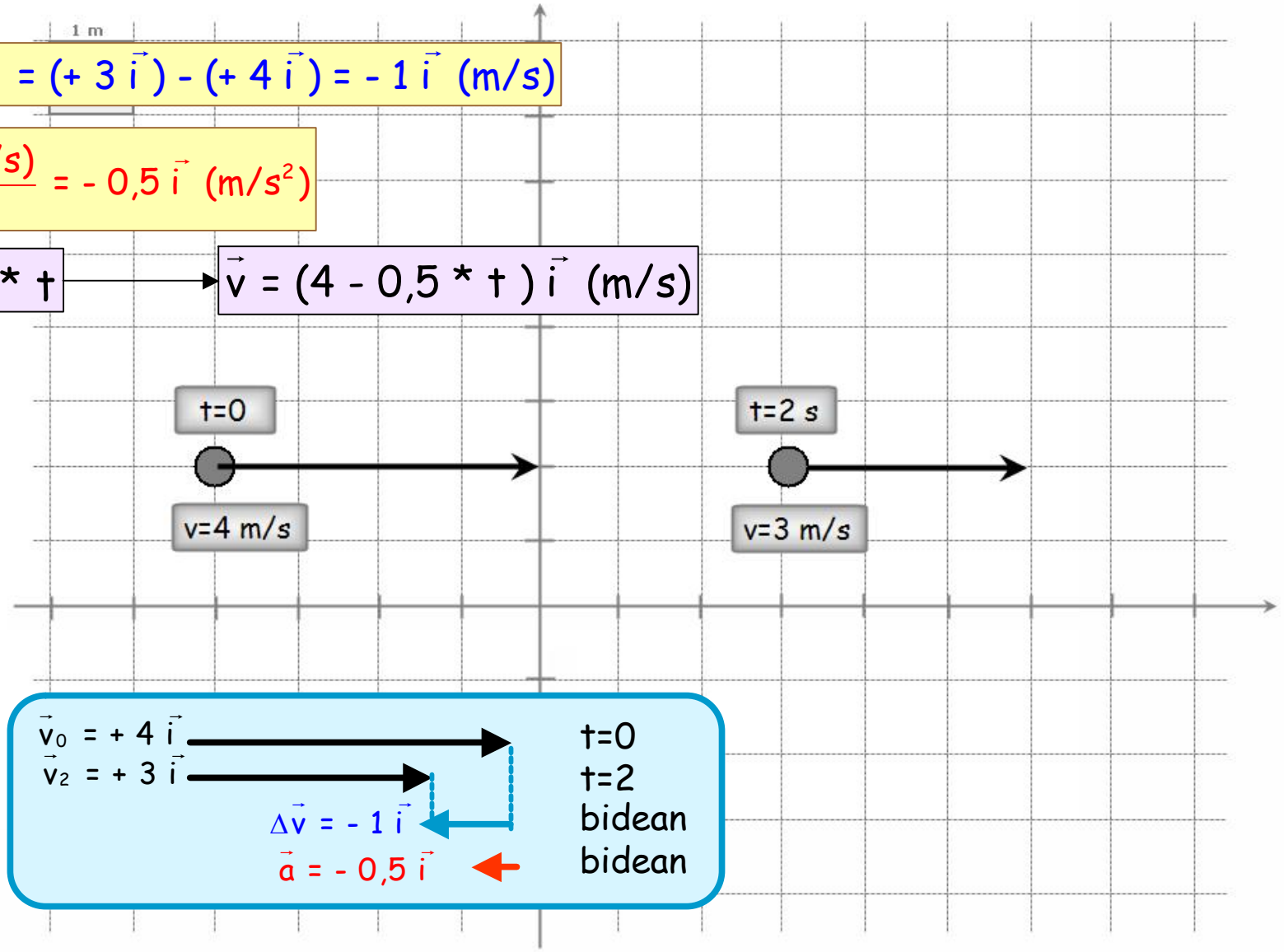
$\Delta\vec{v} = \vec{v}_2 - \vec{v}_0 = (+ 3\,\vec{i}) - (+ 4\,\vec{i}) = - 1\,\vec{i}\ (m/s)$

$\vec{a} = \dfrac{- 1\,\vec{i}\ (m/s)}{2\ s} = - 0{,}5\,\vec{i}\ (m/s^2)$

$\vec{v} = \vec{v}_0 + \vec{a} * t \rightarrow \vec{v} = (4 - 0{,}5 * t)\,\vec{i}\ (m/s)$



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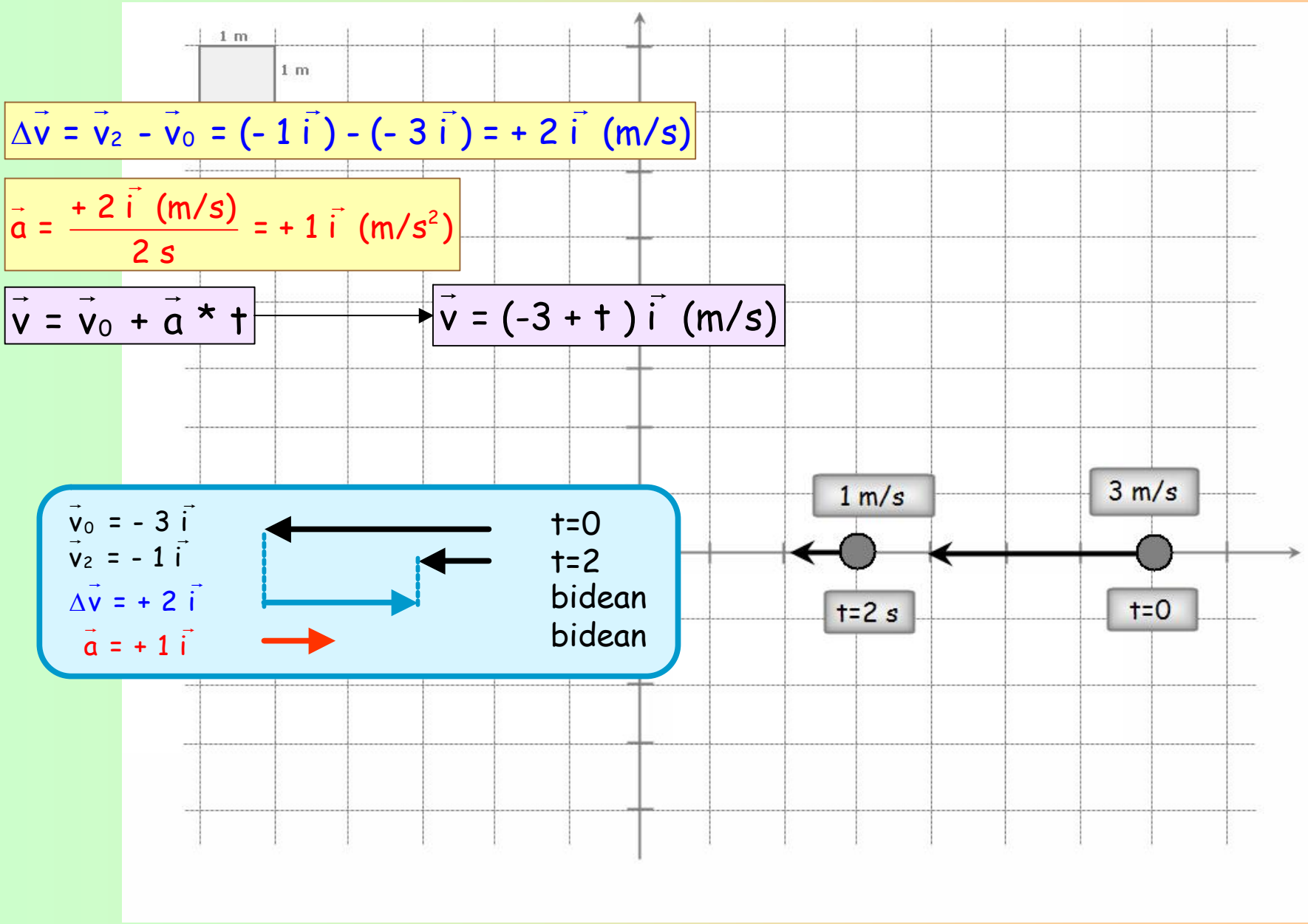

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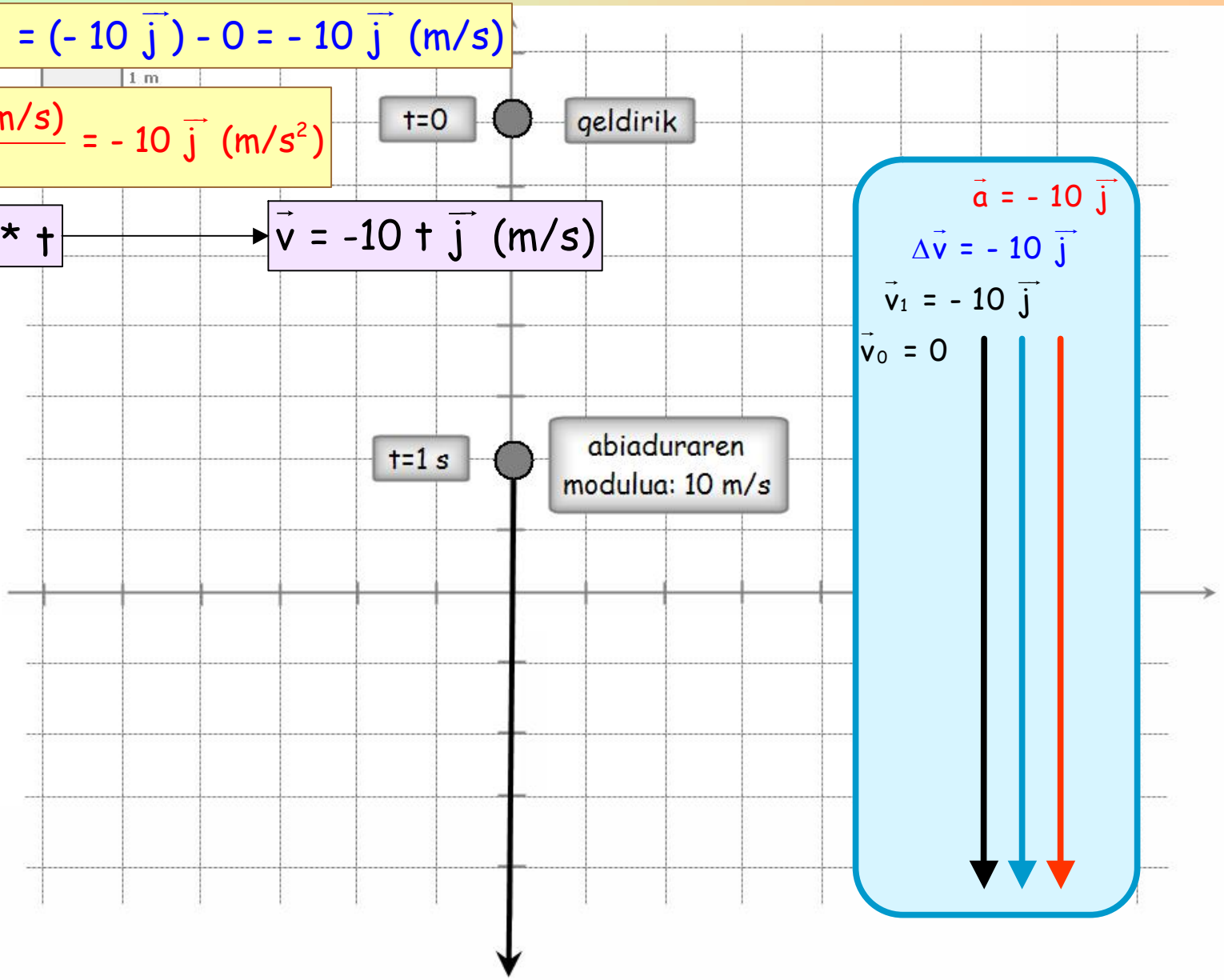
$\Delta\vec{v} = \vec{v}_1 - \vec{v}_0 = (-10\ \vec{j}) - 0 = -10\ \vec{j}\ (m/s)$

$\vec{a} = \dfrac{-10\ \vec{j}\ (m/s)}{1\ s} = -10\ \vec{j}\ (m/s^2)$

$\vec{v} = \vec{v}_0 + \vec{a} * t \rightarrow \vec{v} = -10\ t\ \vec{j}\ (m/s)$



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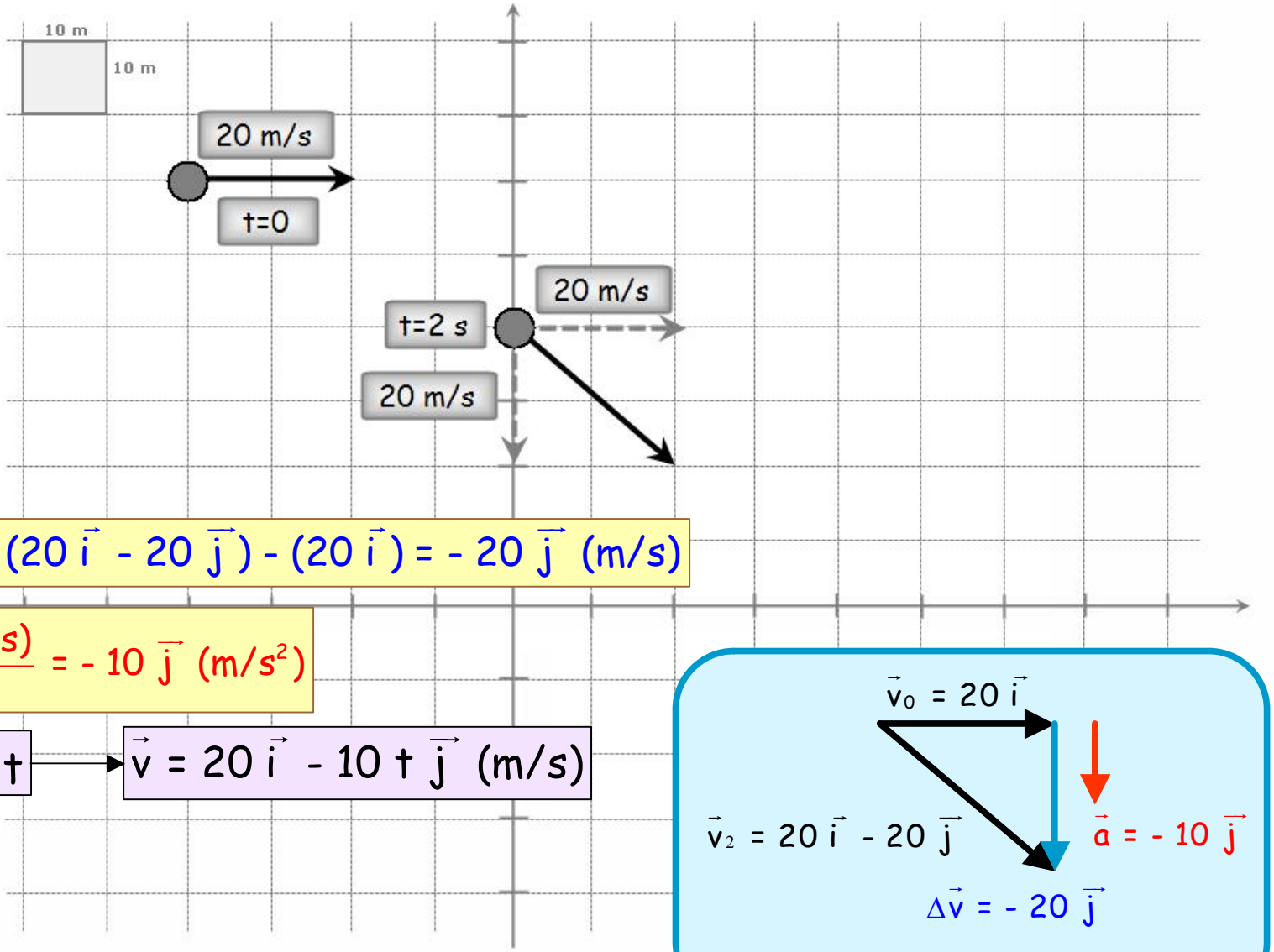

$$\Delta\vec{v} = \vec{v}_2 - \vec{v}_0 = (20\,\vec{i} - 20\,\vec{j}) - (20\,\vec{i}) = -20\,\vec{j}\ (m/s)$$

$$\vec{a} = \frac{-20\,\vec{j}\ (m/s)}{2\ s} = -10\,\vec{j}\ (m/s^2)$$

$$\vec{v} = \vec{v}_0 + \vec{a} * t \rightarrow \vec{v} = 20\,\vec{i} - 10\,t\,\vec{j}\ (m/s)$$