Momentum is defined as $\boldsymbol{p} = \gamma m \boldsymbol{v}$.

$$p = \gamma m v$$
 definition of momentum (1)

$$v = \frac{p}{\gamma m}$$
 solve for velocity (2)

The dot product is really a contraction on two slots, and can be notated as $\mathsf{C}_{1,2}.$

The momentum can be expressed in all the following ways:

$$\begin{array}{c} 4\,\mathrm{kg}\cdot\mathrm{m/s} \\ 4\,\mathrm{kg}\cdot\mathrm{m}\cdot\mathrm{s}^{-1} \\ 4\,\mathrm{kg}\cdot\mathrm{m/s} \\ 4\,\mathrm{kg}\cdot\mathrm{m/s} \\ \langle 3,2,-4\rangle\,\mathrm{kg}\cdot\mathrm{m/s} \\ \langle 3,2,-4\rangle\,\mathrm{kg}\cdot\mathrm{m/s} \\ 3\,\mathrm{N} \\ 3\,\mathrm{J} \\ 3\,\mathrm{N/A}\cdot\mathrm{m} \end{array}$$

The momentum is $3 \text{ kg} \cdot \text{m/s}$ as expected.

The capacitance can be expressed in all the following ways:

$$\begin{array}{c} 4\,A^2 \cdot s^4 \cdot kg^{-1} \cdot m^{-2} \\ 4\,A^2 \cdot s^4 \cdot kg^{-1} \cdot m^{-2} \\ 4\,F \\ 4\,C/V \end{array}$$

$$\begin{array}{l} 3\,\mathrm{kg}\cdot\mathrm{m}\cdot\mathrm{s}^{-2} \\ 3\,\mathrm{kg}\cdot\mathrm{m}^2\cdot\mathrm{s}^{-2} \\ 3\,\mathrm{kg}\cdot\mathrm{A}^{-1}\cdot\mathrm{s}^{-2} \end{array}$$

The resistance can be expressed in all the following ways:

$$\begin{array}{c} 4\,\Omega \\ 4\,\mathrm{kg}\cdot\mathrm{m}^2\cdot\mathrm{A}^{-2}\cdot\mathrm{s}^{-3} \\ 4\,\Omega \\ 4\,\Omega \\ \end{array}$$

$$\begin{array}{c} 3\,\mathrm{N} \\ 3\,\mathrm{J} \\ 3\,\mathrm{T} \end{array}$$

A current of $2\,\mathrm{A}$ and a resistance of $3\,\Omega$ gives a potential difference of $6\,\mathrm{V}$.