

[0011]

Now, when overviewing the relation between mass and energy based on these formulae, it seems more appropriate, this time, to calculate the sum of the product of mass and velocity at each moment of time using Σ as in [Math.9],
5 rather than adopting the formula, (velocity of the substance $\times 1/g$) \times
(time the substance took to progress $\times 1/g$) \times mass = energy in
[0006][Math.1].

[Math.9]

$$\begin{aligned} E &= \sum_{K=1}^t m_K v_K \quad (1 \leq K \leq t) \\ &= \sum_{x=1}^t m_x v_x \quad (1 \leq X \leq t) \end{aligned}$$

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When mass m_x and velocity v_x as indicated in [Math.7] and [Math.8] are substituted for the formula above, the result of the calculation is as follows ;

[Math.10]

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$$\begin{aligned} E &= \sum_{K=1}^t m_K v_K \quad (1 \leq K \leq t) \\ &= \sum_{x=1}^t m_x v_x \quad (1 \leq X \leq t) \\ &= \sum_{x=1}^t m_1 (1 - t_x/t) \times v_1 (1 - t_x/t) \\ &= \sum_{x=1}^t m_1 v_1 (1 - t_x/t)^2 \\ &= \sum_{K=1}^t m_1 v_1 (1 - t_K/t)^2 \end{aligned}$$