

A Distinct Approach Towards Relativity and Time Dilation

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Abstract : Time Dilation is the difference in the amount of time two clocks measure in the same inertial frame. Many studies have explored the relativity of time dilation using various approaches. However, the scientific and mathematical explanation of time dilation of moving things and light pulse clocks still has limited research. Therefore, this article examines relativity by utilizing scientific and mathematical approaches; the experience of moving things and light pulse clock ticks have been examined. The study revealed that the time elapsed for the same process is different for the different observers. Here, it showed that the time can be expressed in the form of a wave. In addition, the relative distance changes between the observers, and the observing subject time flows differently for the observer relative to the observing subject.

Keywords : Einstein's special theory of relativity, reference frame, time dilation, length contraction, Lorentz transformation.

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