On the mathematical-physical meaning of ∞

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ABSTRACT

In conventional space research, the established theory is that the rate of expansion of outer space increases with distance. In addition, there is a history of debate among many researchers on the question of how many dimensions this universe has. The purpose of this study is to briefly explain the above two points using my definition series. In this study, I will apply Einstein's light speed invariance principle to the "∞ invariance principle" that I have been pointing out for a long time.

MAIN

First, this study will be based on my previous study No. 51.
"If you fire an ∞-speed object from a vehicle with ∞ speed, its speed is ∞." is explained by the following formula.

$$\infty[m/s]=3\times\frac{3}{2}=\frac{9}{2}\rightarrow(\infty+\infty)[m/x]=\infty[m/s]$$

$$(3+3)\times\frac{3}{x}=\frac{9}{2}\rightarrow\quad x=4\quad\therefore 2\infty[m/(2s)]$$

Furthermore, "from a vehicle with ∞ velocity, launch a vehicle with ∞ velocity, and from there launch something with ∞ velocity, its velocity is ∞." is similarly explained by the following formula.

$$(\infty+\infty+\infty)[m/x]=\infty[m/s]$$

$$(3+3+3)\times\frac{3}{x}=\frac{9}{2}\rightarrow\quad x=6\quad\therefore 2\infty[m/(3s)]$$

$$\boxed{(n\times\infty)[m/x]=\infty[m/(n\times s)]}$$

Applying Einstein's statement that time flows more slowly as it approaches the speed of light to the mathematical expression ∞, we find that the above equation is similar.
Furthermore, the question of how many dimensions the universe has is the same as the question of how much n is in the above equation.

For example, assuming it is 2-dimensional, n=2, so m/s = m/(2s).
More mathematically speaking, m/s = 3/2. m/(2s) = 3/4, and so on.
By transforming 3/4 = 3/(2^2), we get m/s^2, and at ∞,
acceleration = velocity.
(*This only means that it can be regarded as such, not strictly speaking.)
The above will become clear once actual measurements are made.

REFERENCE

2003.0183v1.pdf (vixra.org)