The report and documentation of the 'Classical mechanics'

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1. Acceleration

The acceleration calculator is sorted as 1)speed difference, 2) mass and force, 3) and distance traveled depended on the given circumstances, which equations require different elements to extract and calculate the acceleration.

1) Speed difference.

To begin with, this equation requires the 'initial speed', 'final speed', and 'time' as the elements to calculate the acceleration. This equation basically originated from the equation :

(1) The velocity

v2 =v1 + at

(v1 : the initial speed, v2 : the final speed, a : acceleration, t : time interval)

then, the acceleration equation is

a = (v2 - v1) / t

In this equation(speed difference), the v1 and v2 are the vector(velocity), not merely literally speed values because the situation of the object's moving is presupposed as 1-dimension condition, but those values have positive and negative directions. This means that the moving object not only has magnitude of vector, but also has the direction. (never confuse that even though the object which has moving in 1-dimension circumstance can has vector values, not only scalar values).