

AP/College Physics 1

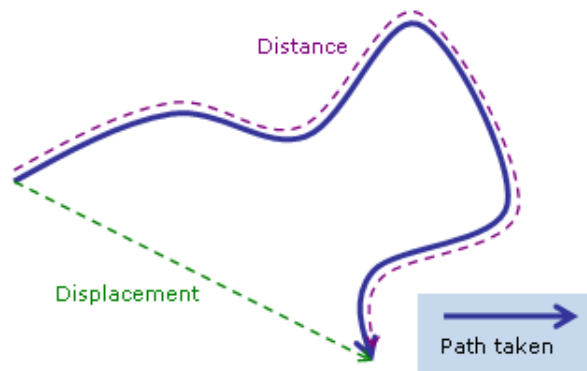
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1. Distance and displacement



Hình 1: Distance and displacement

- Displacement: Change in position of an object. We use the symbol Δx for displacement, where Δ means "change." A vector quantity with units of distance.
- Distance: Total amount the object has moved. This depends on the whole path traveled, not just the starting and ending points. Distance traveled is always a non-negative number. A scalar quantity with units of distance.
- Equation:

$$\Delta x = x - x_0 \quad (1)$$

Δx is displacement, x is the final position, x_0 is the initial position.
Displacement is the difference between the final and initial positions.

2. Average velocity and speed

$$\bar{v} = \frac{\Delta x}{\Delta t} \quad / \quad v_{arg} = \frac{d}{\Delta t}$$