Teacher: Sayan Chakraborti   Student:

Displacement and Speed

Topics: Exploring Vectors, Speed, and Unit Conversions

Problem 1: Vector Operations

Consider a scenario where you are hiking in a forest. You start at point A, walk 3 kilometers North, then 4 kilometers East. Calculate your:

Total displacement from your starting point.
Total distance traveled during the hike.

Illustrate by drawing a picture.

Problem 2: Speed Calculation

You're on a road trip, and you travel 200 miles in 4 hours. Calculate your average speed in:

Miles per hour (mph).
Meters per second (m/s).