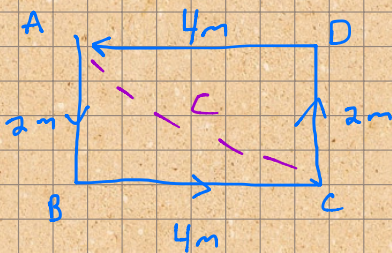


- What is the difference between a vector and a scalar quantity? Provide an example.

- Scalar: has magnitude
- Vector: magnitude and direction

• Distance [Scalar]: how much ground an object covers

• Displacement [Vector]: how far out of place from the start



1. Walk 2m South, 4m East, 2m North, 4m West

- ↳ What is the distance? 12m
- ↳ What is the displacement? 0m, no direction

2. Walk 2m South, 4m East, 2m North,

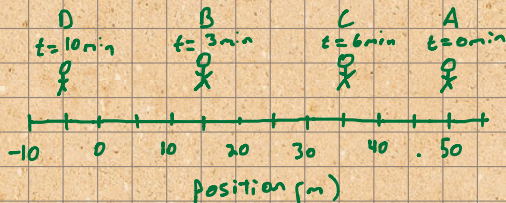
- ↳ What is the distance? 8m
- ↳ What is the displacement? 4m, East

3. Walk 2m South, 4m East

- ↳ What is the distance? 6m
- ↳ What is the displacement? 4.47m, SE

$$\sqrt{2^2 + 4^2} =$$

Exit ticket:



- ↳ What is the distance?
- ↳ What is the displacement?

Hw: Ch2: pg 13 Q's #1 & 2; pg 14 Q #1

■ Questions

- The speedometer in every car also has an odometer that records the distance traveled.
 - If the odometer reads zero at the beginning of a trip and 35 km a half hour later, what is the average speed?
 - Would it be possible to attain this average speed and never exceed a reading of 70 km/h on the speedometer?
- If a cheetah can maintain a constant speed of 25 m/s, it will cover 25 meters every second. At this rate, how far will it travel in 10 seconds? In 1 minute?

■ Question

The speedometer of a car moving northward reads 60 km/h. It passes another car that travels southward at 60 km/h. Do both cars have the same speed? Do they have the same velocity?