Scalars and Vectors

Scalar:

Example:

Vector:

Example:

What does a compass look like?

What is positive and negative?

Scalar vs Vectors

|  |  |  |
| --- | --- | --- |
| Same | Different | Examples |

1Dimensional Displacements

Distance: “How far you have travelled”. It is the total length of a person’s trip from where they started.

Displacement: “How far someone has travelled from their *original* position”.

Ex1: Kerri Oki runs 55m North and then runs 105m South then runs another 45m North. What is her displacement? What distance did she travel?

Ex 2: Earl E Bird bicycles 12km North, 15Km East, 10km West, 15km North, 5km West, and 30 km South. How far has he travelled and what is his displacement?

2 Dimensional Displacements

The first thing we need are the trig ratios.

Ex1: Jen made a displacement of 25km @ 30o [NofW]. What are the component parts (x and y pieces) of the displacement?

Ex 2: Bill Der ran 3.00m North and 4.00m East. What is his displacement? Include angle.