# SPH 4C

### DISTANCE AND DISPLACEMENT

#### Distance –

**Displacement –**

1. Determine the distance traveled if you were at the position 4 km [E] and walked to the position 10 km [W].
2. Determine the displacement if you were at the position 23 km [W] and walked to the position 2 km [W].
3. A shopper walks 800 m [W] from her home to the bank, then 500 m [E] to the store. Call the first displacement *d1* and the second displacement *d2*. What is the shopper’s final position from home *df*?
4. A girl runs twice around a circular track 100 m in diameter. At the end of the run, what is her
5. total distance traveled?
6. displacement from her original position?
7. Can the displacement of an object from its original position ever exceed the total distance moved? Explain.
8. Can the total distance moved ever exceed an object’s displacement from its original position? Explain.