Speed/Velocity

Speed

- Def'n = distance an object travels per unit of time
- Always use the TOTAL DISTANCE traveled and TOTAL TIME taken to travel
- Formula…….s=d/t
- Units will vary, examples are….m/s, km/hr, cm/s, m/min

Velocity

- Def'n = displacement of an object per unit of time
- Displacement includes a direction, so velocity does too!!
- Formula…….v=x/t
- Units are similar to those for speed, except you need a direction! Ex: m/s NW, km/hr SE, cm/s NE

Velocity

- If an object's displacement is 0, then its velocity is 0 regardless of how fast it is moving!
- For example, you can have an object traveling at a speed of 35km/hr but have a velocity of 0!

Speed Calculations

- **1.) Luchita is walking down the hall for 25 meters. It takes her 8.64 s to do this. What is her speed?**
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Speed Calculations

- **2) Tom walks 0.75 km to the bus stop. He then turns and walks another 0.15 km to the store. It takes him 22.45 min to make this trip. What is his speed?**

Speed Calculations

- **3) Mikey is traveling at a speed of 35 m/ sec for 300 s. What is the distance he traveled?**
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Speed Calculations

- **4) Rachael walks 25 m to the store at a speed of 5 m/sec. How long did it take her to do this?**

Velocity Calculations

- **1.) Samantha leaves her house and walks 0.5 km North to visit her friend. It takes her 14 min to make the trip. What is her velocity?**
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Velocity Calculations

- **1) Martha and Greg go on a bike ride. They travel north through the park for 5.7 km, stop for a picnic lunch, and then travel south back to park entrance. The entire trip takes 1.80 hr. What is their speed and velocity?**