- A person runs 8 m [E], 12 m [E], 10 m [W], and finally 5 m [E]. All of this happens in 8.5 s.
 a. Calculate the object's distance and final position.
 - b. Calculate the object's average speed and average velocity.
- 2. A child bikes 55 m [E], 20 m [W], 35 m [W], 45 m [E] and finally 10 m [W]. All of this happens in 16 s.
 a. Calculate the child's distance and final position.
 - b. Calculate the child's average speed and average velocity.
- 3. Some guy flies 180 km [N], 150 km [N], 200 km [S], 75 km [S] and 100 km [N]. All of this happens in 20 hr.
 - a. Calculate the guy's distance and final position.
 - b. Calculate the guy's average speed and average velocity.
- 4. A turtle swims 50 m [S], 75 m [N], 15 m [S], 25 m [S] and then 15 m [N]. All of this happens in 18 s.
 a. Calculate the turtle's distance and final position.
 - b. Calculate the turtle's average speed and average velocity.

- 5. Can an object in motion have the same value of distance and final position? If so, think of an example.
- 6. Can an object in motion have the same value of average speed and average velocity? If so, think of an example.
- 7. What is the average velocity of the Earth after exactly one year? How could we calculate average speed?
- 8. If two people run the same distance but it takes them a different amount of time, can they have the same average speed? Average velocity? Explain your answer.

9. Can two objects in motion have the same average velocity but a different average speed? What about the same average speed but a different average velocity? If so, provide an examples.

10. Can two objects have the same final position but a different distance traveled? What about the same distance but a different final position? If so, provide examples.