Study Guide #2 – Velocity and Acceleration Quiz

Physical Science and Technology

1. A turtle is running down the street with an initial velocity of 11.45 m/s. If it accelerates at 1.3 m/s for 16.3 s, what will its final velocity be? Use the Five Steps.

2. A gigantic ant is running through the hallways of a spaceship. If it runs for 11.8 seconds, has an initial velocity of 7.2 m/s, and accelerates at 8.9 m/s^2, what will its final velocity be? Use the Five Steps.

3. A ferret is walking with a velocity of 7.2 m/s. If it travels 78.2 m, for how long was it walking? Use the Five Steps.

4. A bear is digging into the ground, tunneling after a skunk. After 145.8 seconds of digging, his final velocity is 2.187 m/s. If he was accelerating at 0.015 m/s/s while he was running, what was his original velocity? Use the Five Steps.

5. After the bear catches and eats the skunk, it decides to take a nap. So it walks to its den, which is 4,521.8 meters away from the picnic table where it ate the skunk. If it takes the bear 77.8 seconds to get to its den, what was its velocity? Use the Five Steps.

6. A turtle is running around the earth at the equator. If he runs for 6,824,342,111.2342 seconds, accelerates at 7.47238742971823 m/s^2, and ends up in the exact same spot he started, what was his final velocity? Use the Five Steps. (Hint – what was the turtle's displacement? How can you find velocity if you know displacement and time?)