

KE/PE Homework #1

NAME _____ DATE _____

The average speed of any object in motion can be calculated using the formula:

$$\text{Average speed} = \text{distance} / \text{time}$$

In physics, this formula is made simpler by using letters to represent the variables involved.

V = the average speed (velocity)

S = the distance traveled

$$v = s / t$$

T = the time spent traveling

Using the above formula, solve the following problems:

State formula, substitute numbers, solve, correct units

1. A motorist travels a distance of 406 km. During a 7hour period. What was the average speed?
2. During a canoe race, a camper paddles a distance of 406 meters in 70 seconds. What is the average speed in this race?
3. A rocket travels a distance of 24,000 km during the first 6 hours after launching. What is the average speed of the rocket?
4. An electron travels in a vacuum tube that is 2 meters in length in .002 seconds. What is the average speed of the electron during this time?
5. A bullet leaves the muzzle of a rifle and 5 seconds later becomes embedded in a tree trunk 3000 meters away. What is the average speed of the bullet?
6. Light from the sun requires 8.3 minutes to reach the earth. The average speed of light is 186,000 miles per second. How many miles is the sun away from the earth?