

Name _____ **Answer Key** _____
Honors Physics
Period _____



Date _____
Kinematics WS #2H
Mrs. Nadworny

Constant Velocity

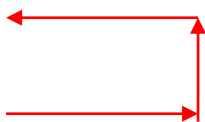
Directions: Read textbook pages 40 – 44. Solve the following problems using the GUESS method. Show all work clearly.

1. One car travels 40. meters due east in 5.0 seconds, and a second car travels 64 meters due west in 8.0 seconds. During their periods of travel, the cars definitely have the same

A) velocity B) momentum C) displacement **D) speed**

2. Last night Shelia Bleige walked 7.0 blocks east, 2.0 blocks north, and finally 7.0 blocks west.
[Draw a picture]

- a. What was her displacement?



Displacement = 2.0 blocks north

- b. What was her distance traveled?

Distance traveled = 7.0 blocks + 2.0 blocks + 7.0 blocks = 16.0 blocks

3. Grant Wishiz rides his bike around the high school and down to the Pulaski Road School. He travels a total distance of 720 meters. The trip takes him 5.3 minutes. What is his average speed in meters/second?

$$\left(\frac{5.3\text{min}}{1}\right)\left(\frac{60\text{sec}}{1\text{min}}\right) = 320\text{sec}$$

$$v = \frac{d}{t} = \frac{720\text{ m}}{320\text{ s}} = 2.3\text{ m/s}$$

4. Amelia Keneet lets her Monster Truck head down the hallway towards the commons. It is traveling at 0.46 m/s. After 155 seconds her teacher realizes what Amelia is doing. How far down the hallway is the truck at that moment?

$$d = vt = (0.46\frac{\text{m}}{\text{s}})(155\text{s}) = 71\text{m}$$

5. Art Zenkraftz walks 200. meters down Elwood Road then turns right onto Pulaski and walks 250 meters. If she is traveling with an average speed of 0.50 m/s, how long will it take her?

$$t = \frac{d}{v} = \frac{200.\text{ m} + 250\text{ m}}{0.50\text{ m/s}} = \frac{450\text{ m}}{0.50\text{ m/s}} = 900\text{ s} = 9.0 \times 10^2\text{ s}$$

Answers in size order: 2.0, 2.3, 16.0, 71, 9.0 x10²