

PHYZ SPRINGBOARD: SPEEDING THRU MOTION



REST STOP AND MOTION

Write brief definitions using words and graphs.

1. Rest

2. Motion

3. Uniform Motion

Complete each statement.

4. a. The rate at which position changes is called

b. It can be written as

c. and abbreviated as

5. a. In uniform motion, _____ is constant. But so is the _____ of motion. In other words, an object in uniform motion has constant _____.

b. The _____ of an object is its _____ and its _____.

6. a. What common device can a driver use to monitor his or her speed?

b. How might a driver determine his or her velocity?

7. a. Can two cars moving with the same **speed** collide? Explain.

b. Can two cars moving with the same **velocity** collide? Explain.

BEYOND UNIFORM MOTION AND ALL THE REST

Complete each statement.

8. a. _____ motion occurs when the velocity of an object is **changing**.

b. If the velocity changes at a **constant** rate, the motion is called

9. a. The rate at which velocity changes is called

b. It can be written as

c. and abbreviated

10. DANGER! Acceleration is arguably the single most difficult concept presented in high school physics.

a. Accelerated motion includes

i.

ii.

iii.

b. What control mechanisms on a car, if any, could be called "accelerators." Justify each answer.

c. **Deceleration** is not the antonym (opposite) of **acceleration**. Explain.

d. An object can be at rest and accelerating **at the same time!**