

NAME:

PERIOD:

DATE:

## Acceleration Classwork #2

**FOR ALL PROBLEMS:** Show formula & work. Label and circle your answer.

1. Max was running east with a velocity of 4 meters/second east, when a cute girl jogged past him. Over a period of 10 seconds, Max sped up to 6 meters/second east to ask her out on a date. What was Max's acceleration?

2. Circle the measurement that is not an acceleration?

A. 3 miles/hour/second west    B. 2 miles/hour west    C. 4 meters/minute/second down

3. Alexandra dropped a penny off the Empire State Building towards her soon to be ex-boyfriend Max who was flirting with a jogger below. The penny fell for 10 seconds with an acceleration of 9.8 meters/second/second. The starting velocity of the penny was 0 meters/second down. What will be the velocity of the penny when it hits Max?

4. What is the formula for speed?

5. What is the definition for speed?

6. Which of the following measurements is not a velocity?

A. 3 meters/second up    B. 4 miles/minute east    C. 2 minutes/meter west

7. Brianne was jogging in the park, and another annoying guy started following her. She was moving at a velocity of 6 meters/second east until the creep sped up to talk to her. She then sped up to 8 meters/second east over the next 4 seconds. What was her acceleration?

8. How are speed and velocity different from each other?



9. A penny falling from the sky hits Max in the head and knocks him out cold. Max was moving at a velocity of 6 meters/second, but in 0.5 seconds, he was moving 0 meters/second. What was his acceleration?

10. What's the difference between accelerating and decelerating?

11. An ambulance sees a jogging man fall to the ground in the middle of the park. Devin the driver, slams on the brakes and the ambulance goes from 35 miles/hour to 0 miles/hour in 2 seconds. What was the acceleration of the ambulance?

12. Once the unconscious jogger is loaded into the ambulance, Devin steps on the gas to head for the hospital. The ambulance reaches 60 miles/hour in 10 seconds. What was the acceleration of the ambulance?

13. The ambulance hits a bump on the way out of the park, and Max tumbles out the back door of the ambulance. He was going 60 miles/hour, and in 2 seconds he's just lying on the ground. What was his acceleration?

14. Max is decelerating in #13. What does that mean?

15. What about the answer to #13 tells you that Max is decelerating and not accelerating?