

Name \_\_\_\_\_

Period \_\_\_\_\_

## Acceleration

**Problems** (Show work to receive credit. Remember to label correctly and circle your answer)

1. What is the acceleration of a car that is traveling at 42 m/sec and speeds up to 53 m/sec in 1.85 seconds?
2. How much time did it take for a rabbit if it went from sitting to 12.4 m/sec by accelerating 2.3 m/sec/sec?
3. What would be the final velocity of a police car that increased its speed from 31 m/sec by accelerating 2m/sec<sup>2</sup> for 8 seconds?
4. What is the initial velocity of a walking cheetah that went from a walking speed to a final velocity of 32 m/sec by accelerating 2 m/sec/sec in 4 seconds?
5. What is the acceleration of a runner in a 100-meter race that reached a velocity of 7 m/sec in 4 seconds?
6. If a bus slows down to a stop by decelerating  $-4\text{m/sec/sec}$  over a time period of 12 seconds, how fast was it originally going?
7. What is the acceleration of a bicycle that went from a stop sign to 13 m/sec in only 2.2 seconds?
8. What is the deceleration of a horse that was traveling at 24 m/sec and slowed down to 6 m/sec in 3.1 seconds?