Name­­\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Per. \_\_\_\_\_\_\_

**IPC Motion, Graphing, and Acceleration Exam Review**

1. What is the equation for calculating speed?
2. Identify the difference between ***distance*** and ***displacement***.
3. Identify the different parts of the equation below.

a = \_\_\_\_\_\_\_ **(vf – vi)**

vf = \_\_\_\_\_\_\_\_ **a = ---------**

vi = \_\_\_\_\_\_\_\_ **t**

t = \_\_\_\_\_\_\_\_

1. Choose from the following options to describe what is happening in each graph below.

The object is …

1. Travelling away from the starting point at a constant speed
2. Returning to the starting point at a constant speed
3. Not moving
4. Accelerating
5. Decelerating



***E. None of the Above***

1. Define acceleration.
2. Correctly label each scenario below as either accelerating, stopped, or moving with a constant velocity.
3. A plane speeding up on a runway. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. The Earth going around the sun. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
5. A car braking. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
6. A man walking 1.7 m/s in a straight line. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
7. A rock being thrown in the air. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
8. A car waiting at a red light. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
9. A car on cruise control going straight. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
10. A car on cruise control on a curve. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
11. Identify the difference between speed and velocity.
12. If you walk 5 blocks South, then turn around and walk 2 blocks North, what is your total distance travelled? \_\_\_\_\_\_\_\_\_\_ What is your total displacement? \_\_\_\_\_\_\_\_\_
13. If you walk 4 blocks East, then turn around and walk 4 blocks West, what is your total distance travelled? \_\_\_\_\_\_\_\_\_\_\_ What is your total displacement? \_\_\_\_\_\_\_\_\_
14. If you are driving at a constant speed of 800 m/h, how long will it take to travel a distance of 3,200 m?
15. You’re driving at 65 mi/h when you come up on an accident and have to slam on your brakes. It takes you 7 seconds (0.002 hr) to come to a complete stop. Calculate your acceleration.
16. Describe what is happening in each section of the **Distance/time** graph below.

**B**

**E**

**D**

**C**

**A**

1. \_\_\_\_\_\_\_\_\_\_\_ B.\_\_\_\_\_\_\_\_\_\_\_ C. \_\_\_\_\_\_\_\_\_\_\_ D.\_\_\_\_\_\_\_\_\_\_\_ E.\_\_\_\_\_\_\_\_\_\_\_