Name: Period:

Equations of Motion 5: *d = vit+ ½at2*

*Show all work and include units*

1. A boat initially traveling at 10 meters per second accelerates uniformly at the rate of 5.0 meters per second squared for 10 seconds. How far does the boat travel during this time?

2. An object initially traveling in a straight line with a speed of 5.0 meters per second is accelerated at 2.0 meters per second squared for 4.0 seconds. The total distance traveled by the object in the 4.0 seconds is

3. A truck with an initial speed of 12 meters per second accelerates uniformly at 2.0 meters per second2 for 3.0 seconds. What is the total distance traveled by the truck during this 3.0-second interval?

4. A race car starting from rest accelerates uniformly at a rate of 4.90 meters per second2. How long does it take the car to travel 200 meters?