Velocity and Acceleration Calculation Worksheet

DIRECTIONS: Solve the following situation problems using equations for velocity and acceleration.

1. What is the speed of a rocket that travels 9000 meters in 12.12 seconds?

2. What is the speed of a jet plane that travels 528 meters in 4 seconds?

3. After an impact involving a non-functioning satellite, a paint chip leaves the surface of the satellite at a speed of 96 m/s. After 17 seconds, how far has the chip landed?

4. The space shuttle Endeavor is launched to altitude of 500,000 m above the surface of the earth. The shuttle travels at an average rate of 700 m/s. How long will it take for Endeavor to reach its orbit?

5. How long will your trip take (in hours) if you travel 350 km at an average speed of 80 km/hr?

6. How many seconds will it take for a satellite to travel 450 km at a rate of 120 m/s?

7. What is the speed of a walking person in m/s if the person travels 1000 m in 20 minutes?

8. How far (in meters) will you travel in 3 minutes running at a rate of 6 m/s?

9. In 0.5 seconds, a projectile goes from 0 to 300 m/s. What is the acceleration of the projectile?

10. A meteoroid changed velocity from 1.0 km/s to 1.8 km/s in 0.03 seconds. What is the acceleration of the meteoroid?