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?

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

11 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?

12 The space shuttle releases a space telescope into orbit around the earth. The telescope goes from being stationary to traveling at a speed of 1700 m/s in 25 seconds. What is the acceleration of the satellite?