Position, Velocity and Acceleration

1. Let $a(t) = -32$ for a ball thrown upward in the air. Let the initial velocity be 16 and the initial position be 20.

   (a) Find the equations $v(t)$ and $s(t)$.

   (b) When is the ball not moving?

   (c) When does the ball hit the ground?

   (d) What is the maximum height of the ball?

2. Let $a(t) = 2e^t + 12t$ for a partical in motion. Let the initial velocity be 16 and the initial position be 20.

   (a) Find the equations $v(t)$ and $s(t)$.

   (b) What is the particle's velocity at time $t = 1$.