1. (3 points) Find the derivative of \( \frac{\sqrt{2x^2 - 3x}}{x^2} \).

2. (3 points) An atom has a half-life of 200 years. If the initial amount is 50 grams, then how many grams are left after \( t \) years (i.e., what is the general formula?).
3. (2 points each) A ball is tossed straight up with an initial velocity of 16 feet per second. The ball is 4 feet above the ground when it is released. Its height at time $t$ is given by $h(t) = -16t^2 + 16t + 4$.

(a) When does the ball reach its maximum height?

(b) What is the ball’s maximum height?