Rocket Equations

$V_2 = ((F/W_{av}) - 1)gt$

$W_{av}$ = average weight of the rocket
F = force (average thrust of rocket engine
g = acceleration due to gravity (32 ft./sec.$^2$)

Force = (Total Impulse/burn time) * 16 oz./1 lb.

To determine the altitude of your rocket, you will need a baseline measure (how far you are from the launcher when you launch your rocket) and the angular distance (the distance the rocket travels from launch point to apogee (highest point). Then you'll need the tangent of the angle. Multiply the tangent of the angular distance by the baseline to get the altitude your rocket reaches.

Example: You are 200 meters away from the launch point. You measured the angular distance at 30˚. The tangent of is .58. Now multiply 200 meters by .58 to get 116 meters.

Tangent of ∠A = opposite side/adjacent side