



Now consider the fact that as the fuel is being ejected from your rocket, the mass of the rocket is changing. It initially weighed 500kg without any fuel in it, but after you added the fuel, it weighed 3100kg.

e) Are there any other forces acting on the rocket? What is the net force acting on it and its acceleration? (Hint: write the mass of the rocket as a function of time)

f) How long will the rocket be able to eject fuel before it runs out?

g) What is the maximum height that you will be able to reach?