1. A particle experiences two forces. One constant force is given as F = F\_0 x(^) (vector F = F(initial) \* x(unit vector)) and the other force is a drag force that is proportional to the velocity with proportionality constant ß.

Write out Newton’s 2nd Law for this particle and solve the differential equation for the particle’s position along the x-axis as a function of time. Show that if the particle starts from rest, the velocity will reach a limiting value of F\_0/ß.