1. Use Euler’s Method with 3 steps to estimate y(3/4) if y(0)=2 and dy/dx = y-4x. Do not round off any numbers in your calculations.

2. Solve the differential equation dy/dx = 10-5y if y(0) = 7.

3. An industrial plant produces radioactive waste as a byproduct of its operations. The waste is produced at a constant rate of 60 grams per year and it decays (turns into a non-radioactive isotope) at a continuous rate of 2% per year.
   a) Write a differential equation whose solution is W(t), the amount of radioactive waste in existence t years after the start of production.

   b) Solve this equation.

   c) Find all equilibrium solutions and indicate if each is stable or unstable.