



A1  $\frac{dV}{dt} = -kA$  where,  $A = 4\pi r^2$   $V = \frac{4}{3}\pi r^3$

volume of droplet from  $t = 0 \rightarrow 10$  min (step-size 0.25 min)

$$k = 0.1 \text{ (mm/min)}$$

$$r_i = 3 \text{ (mm)}$$

$$V_{i+1} = V_i + h f(V_i)$$

$h \rightarrow$  step size

$$\frac{dV}{dt} = -k \left( 4\pi r^2 \right) \quad \left( \frac{3V}{4\pi} \right) = r^3$$

$$= -k \left( 4\pi \left( \frac{3V}{4\pi} \right)^{2/3} \right)$$

$$\frac{dV}{dt}$$

$$V(0) = \frac{4}{3}\pi 3^3 = 113.0973$$

$$V_1 = V_0 + h f(V_0)$$

$$V_2 = V_1 + h f(V_1)$$