1a $y' = 2y, \quad y(0) = 1 = v_0$

$v_{n+1} = v_n + hf(v_n)$

$f(y) = 2y, \quad y(t) = e^{2t}, \quad h = 0.1$

$v_1 = v_0 + hf(v_0)$

$= v_0(1 + 2h) = 1 \cdot (1 + 0.2) = 1.2$

$v_2 = v_1 + hf(v_1)$

$= v_1(1 + 2h) = 1.2 \cdot (1 + 0.2) = 1.44$

$h = 0.05$

$v_1 = 1 \cdot (1 + 0.1) = 1.1$

$v_2 = 1.1(1 + 0.1) = 1.21$

$h = 0.001$

$v_1 = 1(1 + 0.002) = 1.002$

$v_2 = 1.002(1 + 0.002) \approx 1.004$