$\boxed{H8}$ c.ii)   use secant method
                      within 10^{-3}

$$e^x = 3x + 4 \qquad \text{on} \qquad [0,4]$$

- initial guesses for x_0 and x_1: $x_0 = 0$
                                                      $x_1 = 4$

secant method: $x_{m+1} = \dfrac{x_m - x_{m-1}}{f(x_m) - f(x_{m-1})} \cdot f(x_m)$

$$f(x) = e^x - 3x - 4$$

iteration 1:
    $x_0 = 0$ $x_1 = 4$

$f(x_0) = e^0 - 3 \cdot 0 - 4 = -3.000$ $(3dp)$

$f(x_1) = e^4 - 3 \cdot 4 - 4 = e^4 - 16 \approx 38.598$ $(3dp)$

$x_2 = 4 - \dfrac{4 - 0}{(e^4 - 16) - (-3)} \cdot (e^4 - 16) \approx \underline{0.288}$ $(3sf)$

$f(x_2) = e^{0.288} - 3 \cdot (0.288) - 4 \approx \underline{\underline{-3.530}}$ $(3dp)$

iteration 2

    $x_0 = 4$ $x_1 = 0.288$

$f(x_0) = -3$
$f(x_1) = -3.530$

$x = 0.288 - \dfrac{0.288 - 4}{} \cdot (-3.530) = \dfrac{6628}{} \approx 25.011$

x_2

$$-3.530 - (-3)$$

$$f(x_2) = e^{25.011} - 3 \cdot 25.011 - 5 \quad =$$

itteration 3