

①  $f(y) = \cos(y) \quad \text{--- (1)}$

$$\cos y = 0 \quad \text{--- (2)}$$

$$y_{i+1} = \cos y_i + y_i \quad \text{--- (3)}$$

Now having the guess value of  $y = 0.05$

$$y_{i+1} = \cos(0.05) + 0.05 \quad \text{--- (4)}$$

$$y_{i+1} = 1.0500 \quad \text{--- (5)}$$

When  $y_i = 1.0500$

$$y_{i+1} = \cos(1.05) + 1.05 \quad \text{--- (6)}$$

$$y_{i+1} = 2.0498 \quad \text{--- (7)}$$

When  $y_i = 2.0498$

$$y_{i+1} = \cos(2.0498) + 2.0498 \quad \text{--- (8)}$$

$$y_{i+1} = 3.04916 \quad \text{--- (9)}$$

When  $y_i = 3.04916$

$$y_{i+1} = \cos(3.04916) + 3.04916 \quad \text{--- (10)}$$

$$y_{i+1} = 4.0477 \quad \text{--- (11)}$$

When  $y_i = 4.0477$

$$y_{i+1} = \cos(4.0477) + 4.0477 \quad \text{--- (12)}$$

$$y_{i+1} = 5.0452 \quad \text{--- (13)}$$



15/Enw02/028  
Pett

$$② \quad f(z) = e^{-15z} - z + \cos(z)$$

$$e^{-15z} - z + \cos(z) = 0$$

$$z = e^{-15z} + \cos(z)$$

$$z_{i+1} = e^{-15z_i} + \cos(z_i)$$

having a guess value of  $z = 0.1$

$$z_{i+1} = e^{-15(0.1)} + \cos(0.1)$$

$$z_{i+1} = 1.2231$$

When  $z_i = 1.2231$

$$z_{i+1} = e^{-15(1.2231)} + \cos(1.2231)$$

$$z_{i+1} = 0.9998$$

when  $z_i = 0.9998$

$$z_{i+1} = e^{-15(0.9998)} + \cos(0.9998)$$

$$z_{i+1} = 0.99985$$

when  $z_i = 0.99985$

$$z_{i+1} = e^{-15(0.99985)} + \cos(0.99985)$$

$$z_{i+1} = 0.99985$$