

ChE 400 Applied Chemical Engineering Calculations

Solve the following Differential Equations using the most appropriate method:

$$w' - y = 0$$

1. $w + y' + z = 1$

$$w - y + z' = 2 \sin x$$

$$w(0) = y(0) = z(0) = 1$$

2. $y'' + y' + 1/4y = 0$

$$y(0) = 0 \quad y(2) = 1$$

$$w' - y = 0$$

3. $w + zy' + z = 0$

$$w^2 - y + z' = 2 \sin x$$

$$w(0) = 1 \quad y(0) = 1 \quad z(0) = 1$$