

Name: _____

Section: _____

1. Find the general solution to the differential equation

$$y''' - 2y'' + y' - 2y = \cos(2t).$$

Use the method of undetermined coefficients as part of your solution.

2. Solve the system of equations $\mathbf{y}' = A\mathbf{y}$, where

$$A = \begin{bmatrix} 2 & -1 \\ 3 & -2 \end{bmatrix},$$

and

$$\mathbf{y}(0) = \begin{bmatrix} 0 \\ 1 \end{bmatrix}$$