

Problem 27

In each of Problems 21 through 28:

- (a) Determine a suitable form for $Y(t)$ if the method of undetermined coefficients is to be used.
- (b) Use a computer algebra system to find a particular solution of the given equation.

$$y'' + 3y' + 2y = e^t(t^2 + 1) \sin 2t + 3e^{-t} \cos t + 4e^t$$