

Show all of your work as partial credit will be given.

1. Using the method of undetermined coefficients and the superposition principle find a general solution to

$$y'' - 2y = t + e^{-t} - 3 \sin t.$$

Answers

Problem 1.

$$y = c_1 e^{\sqrt{2}t} + c_2 e^{-\sqrt{2}t} - \frac{t}{2} - e^{-t} + \sin t$$