

Math 225 – Quiz #6: Undetermined Coefficients

Clearly and neatly show all work for each problem. Solutions with no work will receive no credit.

Find the general solution for the following differential equations.

$$(1) \ y'''' - y'' - 4y' + 4y = 5 - e^x + e^{-x}$$

$$(2) \ y'' + 2y' + y = x^2 e^{-x}$$

$$(3) \ y'' - 4y' + 8y = x^3; \ y(0) = 2, \ y'(0) = 4$$