1067-Z1-870   **Doreen De Leon*** (`doreendl@csufresno.edu`), 5245 North Backer Avenue, M/S PB108, Fresno, CA 93720. *Undetermined Coefficients – Not Just for Constant-Coefficient Equations Anymore.* Preliminary report.

Recently, an exam given in my upper division differential equations courses contained a problem asking for the general solution of

$$ty'' - (2t + 1)y' + (t + 1)y = 8t^3 e^t,$$

given the complementary solution. To my amazement, one student correctly found the particular solution to this problem by using undetermined coefficients! This led me to wonder what other types of equations can be solved using undetermined coefficients. In this presentation, we will discuss two results in answer to this question. (Received September 16, 2010)