

6.6 – Introduction to Differential Equations

A **differential equation** is an algebraic equation containing an unknown function, y , and at least one of its derivatives. An n th-order differential equation contains derivatives with order equal to, but not exceeding, n .

Which of the following are solutions to the second-order differential equation $y'' + 2y' + y = 0$? Justify your answers.

1. $y = e^{2t}$

2. $y = te^{-t}$

Slope (or Direction) Fields

Start Supplement 6.6. The rest should be completed for HW.