

Ordinary Differential Equations

Classification

Question

For the following differential equation, give its order, and whether it is linear or non-linear. If it is linear, state whether it is homogenous or nonhomogenous.

$$\frac{d^3y}{dt^3} + t\frac{dy}{dt} + t^2y = t^3$$

Answer

Linear, 3rd order, nonhomogeneous.