Partial differential equations (PDEs) are equations that contain partial derivatives of one or more functions and involve two or more independent variables. They are used to describe many types of physical phenomena, including waves, fluid motion, heat transfer, and other phenomena. Common examples of PDEs include the wave equation, the heat equation, and the diffusion equation. PDEs can be solved using analytical techniques, such as separation of variables and integral transforms, or numerical techniques, such as finite difference methods and finite element methods. PDEs can be used to model real-world phenomena in a wide range of fields, from engineering to economics.