Partial differential equations (PDEs) are equations that involve partial derivatives of two or more independent variables. PDEs are used to describe a variety of physical phenomena such as the behavior of fluids, electromagnetic fields, mechanics, quantum mechanics, etc. Examples of PDEs include the heat equation, the wave equation, Euler's equations, etc. In general, partial differential equations are solved numerically, often by finite element or finite difference methods. However, some PDEs can be solved analytically using various techniques such as separation of variables or eigenfunction expansions.