1077-VK-2290   **Jesus A. Pascal*** (`pascal_jesus@yahoo.com`) and **Betsi J. Tirado**
(`betsi_tirado@yahoo.com`). *The Dynamic Programming Equation for a Deterministic Optimal Control Problem.*

The dynamic programming method for solving deterministic optimal control problems replaces the original minimization problem over control functions (infinite dimensional)by a first order nonlinear pde equation called the Hamilton Jacobi Bellman (HJB) equation involving pointwise minimization over the set of control values, usually a subset of a finite dimensional normed vector space. The interest here is to determine the dynamic programming equation for a deterministic optimal control problem with a one dimensional state space. It turns out that the value function of this control problem is a viscosity solution of the dynamic programming (HJB) equation. (Received September 22, 2011)