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**Haiyan Wang\*** ([wangh@asu.edu](mailto:wangh@asu.edu)), Department of Mathematical Sciences & Applied, Arizona State University, Phoenix, AZ 85069-7100. *A periodic boundary value problem.*

We consider the number of positive solutions of a periodic boundary value problem. By constructing a Green's function, the problem is transformed into the fixed point problem of an equivalent operator in a cone. Then the Krasnoselskii's fixed point theorem is used to prove the existence, multiplicity and nonexistence of positive solutions of the periodic boundary value problem. (Received January 23, 2007)