1077-34-239 **John R. Graef*** (john-graef@utc.edu), Department of Mathematics, University of Tennessee at Chattanooga, Chattanooga, TN 37403, and **Lingju Kong** (lingju-kong@utc.edu), Department of Mathematics, University of Tennessee at Chattanooga, Chattanooga, TN 37403. *Positive solutions for a class of higher order boundary value problems with fractional q-derivatives.*

In this paper, we study the boundary value problem with fractional q-derivatives

$$-(D_q^{\nu}u)(t) = f(t,u),\ \ t \in (0,1),$$

$$(D_q^i u)(0) = 0,\ \ i = 0,\ldots,n-2, \quad (D_q u)(1) = \sum_{j=1}^{m} a_j (D_q u)(t_j) + \lambda,$$

where $q \in (0,1)$, $m \geq 1$ and $n \geq 3$ are integers, $n-1 < \nu \leq n$, $\lambda \geq 0$ is a parameter, $f : [0,1] \times \mathbb{R} \to [0,\infty)$ is continuous, $a_i \geq 0$ and $t_i \in (0,1)$ for $i = 1,\ldots,m$,and D_q^{ν} is the q-derivative of Riemann-Liouville type of order ν. The uniqueness, existence, and nonexistence of positive solutions are investigated in terms of different ranges of λ. (Received August 16, 2011)