1096-VO-2009 **George Shakan*** (gshakan@uwyo.edu), University of Wyoming Department of Mathemati, Laramie, WY 82072, and **Antal Balog**. *On the Sum of Dilations of a Set.*

Let p and q be relatively prime positive integers and A a finite subset of the integers. We prove that $p \cdot A + q \cdot A$ cannot be smaller than $(p+q)|A| - C_{p,q}$ where $C_{p,q}$ is a constant only depending on p and q. (Received September 17, 2013)