**Ex. 9.13 Correction.** (Thanks to Yong Wang, Ph.D. student, Chicago)

Suppose there are $N$ bidders with independent private values where bidder $i$'s value is uniform on $[a_i, b_i]$. Show that the following is a revenue maximizing incentive compatible direct selling mechanism. Each bidder reports his value. Given the reported values $v_1, ..., v_N$, bidder $i$ wins the object if $v_i$ is strictly larger than the $N-1$ numbers of the form $\max[a_i, b_i/2 + \max(0, v_j - b_j/2)]$ for $j \neq i$. Bidder $i$ then pays the seller an amount equal to the largest of these $N-1$ numbers. All other bidders pay nothing.