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Zoran Sunic* (sunic@math.tamu.edu). *Frobenius Problem and dead ends in integers.*

Let a and b be positive, relatively prime integers. We show that the following are equivalent: (i) d is a dead end in the (symmetric) Cayley graph of \mathbb{Z} with respect to a and b , (ii) d is a Frobenius value with respect to a and b (it cannot be written as a non-negative or non-positive integer linear combination of a and b), and d is maximal (in the Cayley graph) with respect to this property. In addition, for given integers a and b , we explicitly describe all such elements in \mathbb{Z} . We show that every finitely generated group has a generating set with respect to which dead ends exist. (Received February 03, 2009)