



## The Frobenius Coin Problem

Stephen DeBacker

Abstract for 6 Oct. 2011



Suppose that coins come in two denominations: A cents and B cents. Frobenius (1849-1917) asked: If A and B are relatively prime, and we must use exact change, then what is the most expensive item that we cannot purchase? In 1884 Sylvester (1814-1897) answered Frobenius' question, but as with all good math, the story does not end there. For example, what if we had three denominations? More? We will address Frobenius' original question, and others as time permits.