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The Solution to the 3-Variable Frobenius Number Problem. Preliminary report.

Given a set of relatively prime positive integers a_1, a_2, \dots, a_n , after some point all positive integers are representable as a linear combination of the set with nonnegative coefficients. The last integer that is not so representable is the Frobenius Number, and finding that number is the Frobenius problem or coin problem. While the two-variable solution is widely known, and the general solution is NP-hard, there have been several algorithmic solutions of the three-variable problem. Here we present a formulaic solution for the Frobenius number of all relatively prime triples, and a graphic representation of such. (Received September 25, 2012)