



Math for the people, by the people.

cabtaxi number

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A *cabtaxi number* for a given n is the smallest positive number which can be written as $a^3 + b^3$ in n different ways, with either a or b allowed to be negative integers. For example, 91 is the 2nd cabtaxi number since it can be expressed $(-5)^3 + 6^3 = 3^3 + 4^3 = 91$. The known cabtaxi numbers are 1, 91, 728, 2741256, 6017193, 1412774811, 11302198488, 137513849003496, 424910390480793000, listed in A047696 of Sloane's OEIS. Adding the restriction $a \geq b > 0$ gives the definition for the taxicab numbers.