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On Oct 24, 2:30 pm, mukesh tiwari <mukeshtiwari.ii...@xxxxxxxx> wrote:

Hello everybody . i have to find the smallest positive integer that has exactly k divisors. for example if k=6 then 12 is the minimum number which have 6 divisors. One brute force approach i came across is find the prime factorization and calculate the factors until factors are equal to the k but this one is taking to much time even for 2000 factors .

This is the kind of thing that ought to be found in the Encyclopedia of Integer Sequences. And sure enough one finds

<http://www.research.att.com/~njas/sequences/A005179>

See the various references to this question given there. For example you will find among others the reference:

M. E. Grost, The smallest number with a given number of divisors, Amer. Math. Monthly, 75 (1968), 725–729.

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