LCM of given array elements

Given an array of n numbers, find LCM of it.

Example:

Input: {1, 2, 8, 3}

Output: 24

Input: {2, 7, 3, 9, 4}

Output: 252

We know.

$$LCM(a,b) = \frac{a*b}{gcd(a,b)}$$

The above relation only holds for two numbers,

$$LCM(a, b, c) \neq \frac{a*b*c}{gcd(a, b, c)}$$

The idea here is to extend our relation for more than 2 numbers. Let's say we have an array arr[] that contains n elements whose LCM needed to be calculated.