Off by 1 example

$n = 15$ output $= 243$ $3 \times 3 \times 3 \times 3 \times 3 = 243$

$$[0, 15, 0, 0, 0, 0, 0]$$

list[2] = 15//2 = 7 ⎫ = 56
        8//1 = 8 ⎭

list[3] = 15//3 = 5 ⎫
       10//2 = 5 ⎬ = 125
       5//1 = 5 ⎭

list[4] = 15//4 = 3 ⎫
      12//3 = 4 ⎬ = 192
      8//2 = 4 ⎪
      4//1 = 4 ⎭

list[5] = 15//5 = 3 ⎫
      12//4 = 3 ⎪
      9//3 = 3 ⎬ 243
      6//2 = 3 ⎪
      3//1 = 3 ⎭

list[6] = 15//6 = 2 ⎫
      13//5 = 2 ⎪
      11//4 = 2 ⎪
      9//3 = 3 ⎬ 216
      6//2 = 3 ⎪
      3//1 = 3 ⎭

to make sure, return max(list)