Triple Threat
Filename: triple

We define a triple threat as any positive integer with at least three unique prime factors. Recall that prime numbers are integers greater than one that only have 1 and themselves as divisors. The smallest triple threat is 30 since 30 = 2 x 3 x 5. For each triple threat, define its triple power to be the product of its three largest unique prime factors. For example, the triple power of 210 is 105 since the three largest unique prime factors of 210 are 3, 5 and 7, which multiply to 105.

The Problem
Given at integer, determine its triple power.

The Input
The first line of the input file will contain a number n $(1 \leq n \leq 100)$ indicating the number cases to process. The following n lines each contain one positive integer, m $(m \leq 100000)$, indicating the value for which we want to find the triple power.

The Output
For each case, if it's a triple threat, print out its triple power, on a line by itself. If it isn't a triple threat, print out -1 on a line by itself.

Sample Input
```
3
2
30
210
```


Sample Output
```
-1
30
105
```