# Algorithms Advanced with C#: Exam

Please submit your solutions (source code) to all the below-described problems in [Judge](https://judge.softuni.org/Contests/4128).

## TimberMax Dilemma

You are the manager of a lumber company, and you have a collection of long wooden logs that need to be cut into smaller pieces for sale. Each log has a certain **length**, and you want to **maximize the total revenue** generated from selling the log pieces. The prices for log pieces are not uniform and vary based on their **length**.

Write an algorithm to determine the **maximum possible revenue** that can be obtained by **cutting up the logs** **and** **selling the pieces**. Your algorithm should take into account the varying prices for log pieces and ensure that the pieces are cut in a way that **maximizes the total revenue**.

### Input

* + On the first line, you will receive a sequence of integers representing the prices for each length of log. The sequence will be in the following format: **"{priceLen1} {priceLen2} ... {priceLenN}"**.
    - Each price will always refer to a length equal to its position in the sequence. The first price will be for a length of 1, etc.
    - The prices will be positive integers.
  + On the second line, you will receive an integer **k**, the length of each log you have for cutting.
    - **k** will always be a positive integer.

### Output

* + The output consists of a single line containing an integer, which represents the **maximum possible revenue** that can be obtained by cutting up a single log.

### Examples

|  |  |
| --- | --- |
| **Input** | **Output** |
| 1 5 8 9 10  5 | 13 |
| 1 5 8 9 10 17 17 20 24 30  10 | 30 |