

# Word Wrapper

Program Name: wrap.java

Input File: wrap.in

“Word wrap” is a feature that causes a word processor to fit text within the margins of a document by putting as many words as possible on one line before automatically wrapping to the next line. In the event that a single word is bigger than the space allowed by the margins, the word will appear on its own line. Given an unformatted line of text and a number of columns, output the text so that it wraps at a given number of columns.

Ex:

Given the text:

Give a man a fish, and feed him for a day.

And a number of columns, 8, the resulting text would be:

```
Give a
man a
fish,
and feed
him for
a day.
```

Also, given the text:

Teach a man to fish, and feed him for a lifetime.

And a number of column, 8, the resulting text would be:

```
Teach a
man to
fish,
and feed
him for
a
lifetime.
```

Note:

- Words are kept as contiguous units. A word is defined as a contiguous string of non-whitespace characters (e.g., “fish,” and “day.” are words).
- Each line must be  $x$  columns or less, where  $x$  is the number of columns specified, unless the line contains a single word whose length is greater than  $x$  (e.g., the length of “lifetime.” is greater than 8).
- Spaces between words on different lines are deleted when wrapping text.

## Input

The first line of input will contain a single integer  $n$  indicating the number of data sets. Each data set will consist of two lines:

1. An integer  $x$ , where  $1 \leq x \leq 50$ , specifying the number of columns for the output text.
2. A line of text, which consists of a series of words, each separated by a single space.

## Output

The output for each data set will be the input text, formatted within the specified number of columns as described above.

**Example Input File**

```
3
8
Give a man a fish, and feed him for a day.
12
A stitch in time saves nine, but a safety pin is quicker.
16
What goes around, comes around.
```

**Example Output To Screen**

```
Give a
man a
fish,
and feed
him for
a day.
A stitch in
time saves
nine, but a
safety pin
is quicker.
What goes
around, comes
around.
```