

Summations • [Mark Senn](#) • Last updated on 2022-05-07 at 16:12-04:

Problem Statement

From [The Weekly Challenge - 163 Task #2: Summations](#) retrieved on 2022-05-04 at 17:59-04:

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You are given list positive numbers, @n.

Write a script to find out the summations as described below.

Example 1:

Input: @n = (1, 2, 3, 4, 5)

Output: 42

```
1 2 3 4 5
  2 5 9 14
    5 14 28
      14 42
        42
```

The nth Row starts with the second element of the (n-1)th row.

The following element is sum of all elements except first element of previous row.

You stop once you have just one element in the row.

Example 2:

Input: @n = (1, 3, 5, 7, 9)

Output: 70

```
1 3 5 7 9
  3 8 15 24
    8 23 47
      23 70
        70
```

Raku Solution

```
# Use version 6.d of the Raku language.
use v6.d;
```

```
Test((1, 2, 3, 4, 5));
Test((1, 3, 5, 7, 9));
```

```
# Make a copy of @n so we don't write over values in the original @n.
sub Test(@n is copy)
{
```

```
    say "Input: @n = ({@n.join(', ')});"
```

```
    # Use the variable $row to be consistent with the problem description.
    # We don't need a two-dimensional array---all operations ore done on
    # on a one-dimensional array.
    for (1..^@n.elems) -> $row
```

```
{
  for ($row+1..^@n.elems) -> $col
  {
    @n[$col] = @n[$col-1] + @n[$col];
  }
}

say "Output: ", @n.tail;
}
```