

Here's how the internal mechanism works when using ``reduce``:

### 1. Start with the First Two Numbers

The function ``add(x, y)`` is applied to the **first two elements** of the list:

```
```\n\nx = 47, y = 11\nadd(47, 11) = 58\n```\n
```

Now, replace these two numbers with their sum in the list:

**List becomes:** ``[58, 42, 13]``

### 2. Move to the Next Number

The result from the first step (``58``) is combined with the **next element** in the list:

```
```\n\nx = 58, y = 42\nadd(58, 42) = 100\n```\n
```

Now, replace these two numbers with their sum in the list:

**List becomes:** ``[100, 13]``

### 3. Combine the Final Two Numbers

The result from the second step (``100``) is combined with the **last element** in the list:

```
```\n\nx = 100, y = 13\nadd(100, 13) = 113\n```\n
```

Now, there's only one number left:

**List becomes:** ``[113]``

### 4. Final Result

The final result is **113**, which is the sum of the list ``[47, 11, 42, 13]``.

**In Short: How It Adds Up**

- Step 1:  $47 + 11 = 58$
- Step 2:  $58 + 42 = 100$
- Step 3:  $100 + 13 = 113$