

Q. Write the internal mechanism for sum operation using reduce function on this given list: [47, 11, 42, 13]

Answer: Reduce function from the functools module in Python takes 2 arguments

- ① A binary function that takes 2 arguments and returns a result.
- ② An iterable (like a list) is reduced using binary function

code

```
from functools import reduce
```

```
numbers = [47, 11, 42, 13]
```

```
result = reduce(lambda x, y: x+y, numbers)
```

```
print(result)
```

mechanism:

① first $x = 47$ & $y = 11$, so $x+y = 47+11 = 58$
58 is stored as result.

② Now $x = 58$ & $y = 42$, so $x+y = 58+42 = 100$
100 is stored as result.

③ further $x = 100$, $y = 13$ so $x+y = 100+13 = 113$
113 is stored as result.

`print(result)` will get printed as 113.