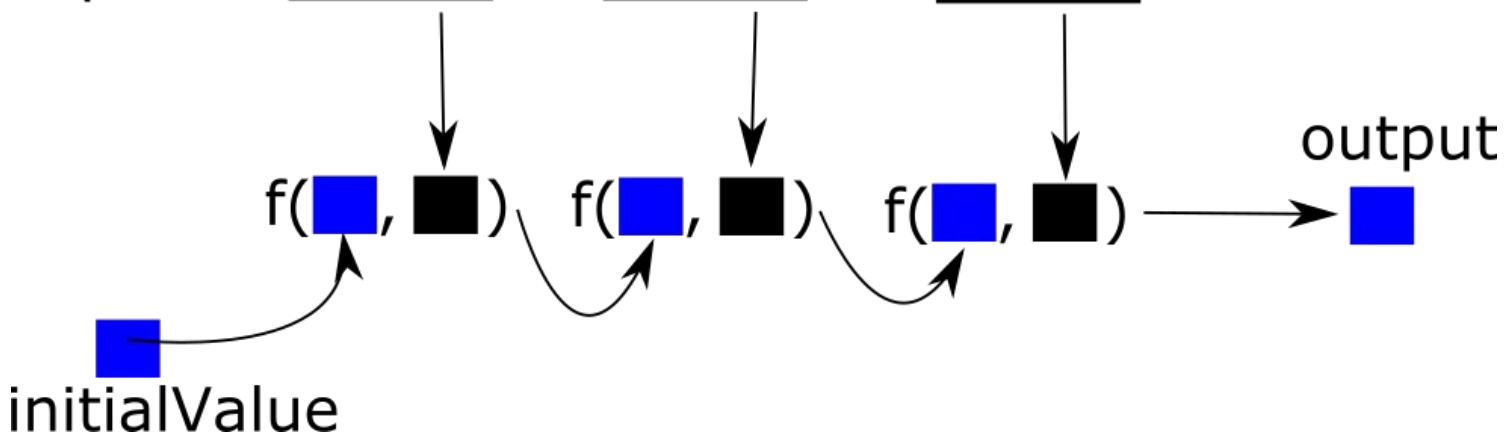


```
function reduce(array, f, initialValue) {  
  let value = initialValue;  
  for (let i = 0; i < array.length; ++i) {  
    value = f(value, array[i]);  
  }  
  return value;  
}  
array.reduce(f, initialValue)
```

input: [ ,  , ]



```
function map(array, f) {  
  let callback = function(newArray, x) {  
    newArray.push(f(x));  
    return newArray;  
  }  
  return array.reduce(callback, []);  
}
```

array.map(f)

input: [ ,  , ]

f()

f()

f()

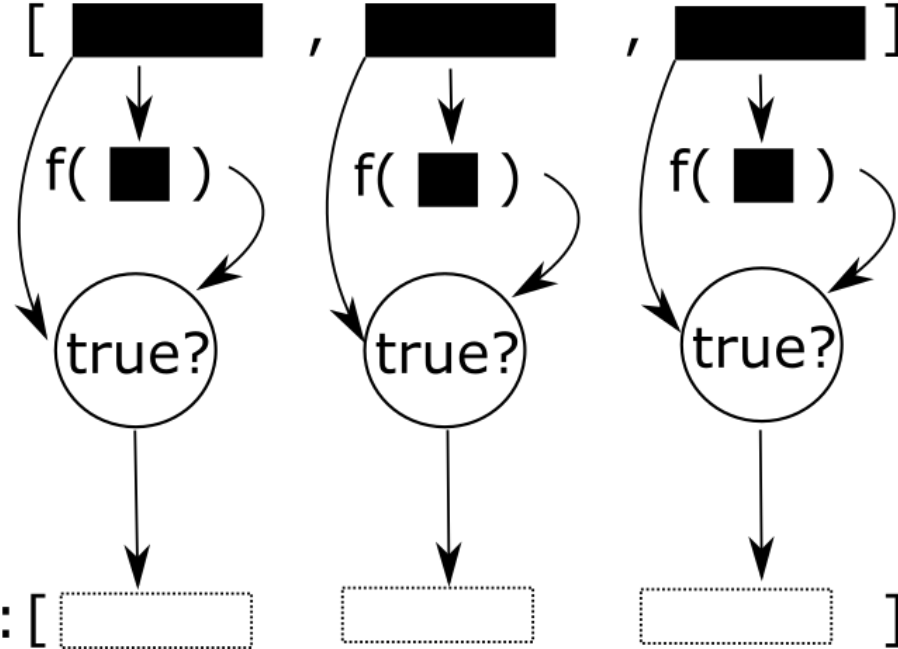
output: [ ,  , ]


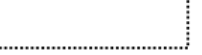



```
function filter(array, f) {  
  function callback(newArray, x) {  
    if (f(x)) {  
      newArray.push(x);  
    }  
    return newArray;  
  }  
  return array.reduce(callback, []);  
}
```

array.filter(f)

input: [ ,  , ]



output: [ ,  , ]