

COMP 333
Fall 2025

List Routines in Functional Programming (Answers)

For all of these questions you have an input array named `arr`, and you need to call a function on it to return an output array corresponding to whatever the question is asking.

1.) Extract all the elements which are even (hint: use `filter`).

```
arr.filter(e => e % 2 === 0)
```

2.) Produce a new array, where each element is the result of a corresponding element in `arr + 7` (hint: use `map`).

```
arr.map(e => e + 7)
```

3.) Produce the smallest element in `arr`. You may assume that no element is greater than 0 (hint: use `reduce`).

```
arr.reduce(  
  (accum, element) => (element < accum) ? element : accum,  
  0)
```

4.) Find the sum of all the odd elements in `arr`. The sum of an empty array is 0. (hint: use `filter` and `reduce`).

```
arr.filter(e = e % 2 === 1).reduce((accum, e) => accum + e, 0)
```