Unsorted Array: Insertion and Removal of Elements

1. Given an unsorted integer array, return a new array with only the odd numbers from the input array.

2. Given an unsorted integer array, return a new array with only the even numbers from the input array.

3. Given an unsorted integer array, return a new array containing only the perfect squares from the input array.

4. Given an unsorted integer array, return a new array containing only the prime numbers from the input array.

5. Given an unsorted array A of size N and two integer values D and K, return a new array where you find all occurrences of D and replace it with K.

6. Given an unsorted array A of size N and an integer K, find and remove the occurrences of K from the given array and return a new array of appropriate length after removal of K. Return the same input array, if K is not found. Order of other array elements should not be disturbed.

7. Given an unsorted array A of size N, an integer K and a location X, insert K at the location X of A and return the new array of size N+1. Order of other array elements should not be disturbed.

8. Given an unsorted array A of size N and a location X, remove the element at location X and return a new array of size N-1. Order of other array elements should not be disturbed.