(5) ① Difference of 2 arrays.

n_1, arr1[n1] find arr1 − arr2

n_2, arr2[n2] ASSUME arr2 is always larger

CODE

```
int[] ans = new int[n2]; int diff=n2-n1, borrow=0;
for (int i=n2-1; i>=0; i--){
    if (i-diff>=0) ans[i]= arr2[i] - arr1[i-diff] - borrow;
    else ans[i] = arr2[i] - borrow
    if (ans[i]<0) { borrow=1; ans[i] += 10; }
    else borrow=0;
}
int i=0;
while (arr[i]==0) i++;
for( ; i<n2; i++)
    System.out.println( ans[i]);
```

Number System MCQs.

$(542)_{10} = (\ )_8$ $(634)_8 = (\ )_{10}$

8	542	6
8	67	3
	8	0
	1	

$4\times8^0 + 3\times8^1 - 6\times8^2$

$= 412$

$\rightarrow (1036, 412)$

② Reverse an array

6	2	3	4	5	1	7

↑ left ↑ right

```
int left=0, right= n-1;
while(left < right){
    int temp= arr[left];
    arr[left] = arr[right];
    arr[right] = temp;
    left++;
    right--;
}
```

③ Rotate an array.

→ for k rotations

① if (k > n) k %= n;

② if (k < 0) k = (k % n) + n;

③ reverse (arr, 0, k-1);
reverse (arr, k, n-1);
reverse (arr, 0, n-1);

④ Inverse of an Array

for i from 0 to n-1, by 1

ans [arr[i]] = i;