1. To count the number of digits : (int)(Math.log10(num)) + 1;

2. Better way to calculate middle element in binary search : start + (end-start)/2

3. Best way to check the order in which array is sorted for binary search : arr[start] > arr[end] - order agnostic binary search (compare first and last element of the array)

BITWISE OPERATORS –

1. N << 1 (i.e. any number leftshift by 1) = 2N (double of number)
2. General Formula1: a << b = a\* 2b
3. General Formula2: a >> b = a/2b
4. N XOR 1 = N’ (one’s complement of N)
5. N XOR 0 = N
6. N XOR N = 0

WHEN TO APPLY WHAT –

1. When given number range from 1 to n or 0 to n -> Cyclic sort
2. When given sorted array -> Binary Search