Maths

1) Reverse a number :

→ Find remainder of given number.
→ Declare variable reverse & multiply 10 to it. Add remainder to it.

→ Divide no. by 10.
→ Everything happens while no. is positive

2) Sum of Digits :

→ Find remainder of given number.
→ Declare variable sum & multiply 10 to it & add remainder
→ Divide no. by 10, while no. doesn't get equal to 0.

3) Prime number :

→ If no. is 0, 1 then it isn't prime
→ Iterate from $i = 1$ to $i < \sqrt{n}$
→ Maintain a bool variable to check if no. divides i completely.

→ If it does, then it is prime.

4) Seive of Eratosthenes :

→ Eliminate multiples of known prime no's.
→ Declare bool arr of size n+1, because we have to include n while iterating.
→ If a prime number is found, then iterate through all of its multiples and mark them false.
→ Time complexity : $O(N \log(\log N))$

5) Square root :

→ Use inbuilt sqrt() method
→ Use binary search for optimised solution

6) HCF / GCD :

→ Use euclid's principle: $hcf(a,b) = hcf(b\%a, a)$

7) LCM :

→ Use formula: $LCM(a,b) = \frac{a*b}{HCF(a,b)}$