

- Use Algebraic formulae to solve Sq. Problems.
- Divisibility tests, Prime no., Co-prime, Composites.
- Series:-

AP  $\rightarrow$

$$n^{\text{th}} \text{ term} = a + (n-1)d$$

$$\text{Sum} = \frac{n}{2} [2a + (n-1)d] = \frac{n}{2} (a+l)$$

GP  $\rightarrow$

$$n^{\text{th}} \text{ term} = ar^{n-1}$$

$$\text{Sum} = a \left| \frac{r^n - 1}{r - 1} \right|$$

$$1 + 2 + 3 + 4 + \dots = \frac{n(n+1)}{2}$$

$$1^2 + 2^2 + 3^2 + 4^2 + \dots = \frac{1}{6} n(n+1)(2n+1)$$

$$1^3 + 2^3 + 3^3 + \dots = \frac{1}{4} n^2(n+1)^2$$

→ LCM & HCF  $\rightarrow$

↳ Product of 2 No.s = H.C.F  $\times$  L.C.M

↳ Divide numerator & Denominator by HCF for lowest term fractions.