

⇒ Partial Fractions

1] → Thumb Rule: Check if the degree of ~~numerator~~ numerator is equal to the degree of denominator
OR

the degree of numerator is greater than the degree of denominator

→ If yes

$$\text{then } f(x) = \text{quotient} + \frac{\text{remainder}}{\text{divisor}}$$

$$\text{then } \frac{\text{remainder}}{\text{divisor}} = \frac{A}{"} + \frac{B}{"}$$

2] if
$$\frac{12 + 12x - 4x^2}{(2+x)(3-2x)^2}$$

$$\text{then } \frac{A}{2+x} + \frac{B}{3-2x} + \frac{C}{(3-2x)^2}$$

3] if
$$\frac{12 + 12x - 4x^2}{(2+x)(3-2x^2)}$$

$$\text{then } \frac{A}{(2+x)} + \frac{Bx + C}{(3-2x^2)}$$