

## Integrais Indefinidas de Funções Racionais, calculadas por Frações Parciais

### EXERCÍCIOS:

$$1) \int \frac{3x+2}{x^2-10x+9} \cdot dx \quad I = -\frac{5}{8} \cdot \text{Ln}|x-1| + \frac{29}{8} \cdot \text{Ln}|x-9| + k$$

$$2) \int \frac{(x^2+2)}{x^2-3x+2} \cdot dx \quad I = x + 6 \cdot \text{Ln}|x-2| - 3 \cdot \text{Ln}|x-1| + k$$

$$3) \int \frac{(5x+4)}{x^2+8x+12} \cdot dx \quad I = -\frac{3}{2} \cdot \text{Ln}|x+2| + \frac{13}{2} \cdot \text{Ln}|x+6| + k$$

$$4) \int \frac{1}{x^2-4} \cdot dx \quad I = \frac{1}{4} \cdot \text{Ln}|x-2| - \frac{1}{4} \cdot \text{Ln}|x+2| + k$$

$$5) \int \frac{(5x^2+1)}{x^2-1} \cdot dx \quad I = 5x + 3 \cdot \text{Ln}|x-1| - 3 \cdot \text{Ln}|x+1| + k$$

$$6) \int \frac{x^2+3}{x^2-9} \cdot dx \quad I = x - 2 \cdot \text{Ln}|x+3| + 2 \cdot \text{Ln}|x-3| + k$$

$$7) \int \frac{(x^3+x+1)}{x^2-4x+3} \cdot dx \quad I = \frac{x^2}{2} + 4x + \frac{31}{2} \cdot \text{Ln}|x-3| - \frac{3}{2} \cdot \text{Ln}|x-1| + k$$

$$8) \int \frac{(2x+1)}{x^2-1} \cdot dx \quad I = \frac{3}{2} \cdot \text{Ln}|x-1| + \frac{1}{2} \cdot \text{Ln}|x+1| + k$$

$$9) \int \frac{(x+3)}{(x-1)^2} \cdot dx \quad I = \text{Ln}|x-1| - \frac{4}{x-1} + k$$