



**EXERCÍCIOS DE CÁLCULO 1**  
**INTEGRAIS INDEFINIDAS - FRAÇÕES PARCIAIS - TRIGONOMÉTRICAS**  
**- LISTA 7 -**

1) Calcule as integrais:

a)  $\int \frac{x^2 - x + 1}{x^4 - x^3 - 7x^2 + x + 6} dx$

d)  $\int \frac{1}{(x+2)^3(x-1)^2} dx$

b)  $\int \frac{x^4 - x^2 + x + 1}{x^2 - x - 6} dx$

e)  $\int \frac{x+1}{x^4 - 3x^3 + 4x^2 - 3x + 1} dx$

c)  $\int \frac{2x+1}{x^4 - 6x^3 + 13x^2 - 12x + 4} dx$

f)  $\int \frac{1}{(x^2 - 2x + 2)^2(x+1)} dx$

2) Ache as primitivas abaixo:

g)  $\int \cos^2(y) dy$

k)  $\int \cos^4(y) dy$

h)  $\int \sin^2(x) dx$

l)  $\int \sin^4(x) dx$

i)  $\int \sin^4(t) \cos^5(t) dt$

m)  $\int \sin^4(x) \cos^4(x) dx$

3) Calcule as integrais:

a)  $\int \frac{\sqrt{16-x^2}}{4x^2} dx$

f)  $\int \frac{\sqrt{(9-x^2)^3}}{x^2} dx$

b)  $\int \sqrt{4-x^2} dx$

g)  $\int \sqrt{10-4x^2} dx$

c)  $\int \frac{\sqrt{9-x^2}}{x^2} dx$

h)  $\int \frac{2x+3}{\sqrt{4-x^2}} dx$

d)  $\int \frac{\sqrt{25x^2-4}}{x} dx$

e)  $\int \frac{x^2}{\sqrt{4-x^2}} dx$

i)  $\int \frac{1}{\sqrt{4x^2-49}} dx$