7ª. LISTA *FRAÇÕES PARCIAIS* *CÁLCULO II*

Resolva:

1. $\int \frac{-2x}{x^2-1}dx$
2. $\int \frac{2-x}{x^3+2x^2-3x}dx$
3. $\int \frac{1-x}{(x+1)^2(x-5)}dx$
4. $\int \frac{x^2+x-1}{(x^2-4)(x-1)}dx$
5. $\int \frac{3x^2}{x^2-x-2}dx$
6. $\int \frac{x^3-5x}{x^2-x-6}dx$
7. $\int \frac{x-5}{(x^2-4x+4)(x+1)}dx$
8. $\int \frac{1-x^3}{x^2+4x+3}dx$
9. $\int \frac{x^2-2x-3}{x^2+2x-3}dx$
10. $\int \frac{1-2x}{(x-1)^3(x-2)}dx$
11. $\int \frac{4}{x^3+x}dx$
12. $\int \frac{10x}{(x^2+4)(x+1)}dx$

Respostas:

1. $-\ln|x-1|-\ln|x+1|+C$
2. $\frac{1}{4}\ln|x-1|-\frac{2}{3}\ln|x|+\frac{5}{12}\ln|x+3|+C$
3. $-\frac{1}{9}\ln|x-5|+\frac{1}{9}\ln|x+1|+\frac{1}{3(x+1)}+C$
4. $-\frac{1}{3}\ln|x-1|+\frac{5}{4}\ln|x-2|+\frac{1}{12}\ln|x+2|+C$
5. $3x-\ln|x+1|+4\ln|x-2|+C$
6. $\frac{1}{2}x^2+x-\frac{2}{5}\ln|x+2|+\frac{12}{5}\ln|x-3|+C$
7. $\frac{1}{x-2}-\frac{2}{3}\ln|x+1|+\frac{2}{3}\ln|x-2|+C$
8. $-\frac{1}{2}x^2+4x+\ln|x+1|-14\ln|x+3|+C$
9. $x-\ln|x-1|-3\ln|x+3|+C$
10. $3\ln|x-1|-\frac{3}{x-1}-\frac{1}{2(x-1)^2}-3\ln|x-2|+C$
11. $-2\ln|x^2+1|+4\ln|x|+C$
12. $\ln|x^2+4|-2\ln|x+1|+4arctg\left(\frac{x}{2}\right)+C$