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TEMA: Problemario

SEMESTRE: 6to

MATEMÁTICAS APLICADA

PLATAFORMA

$\int \frac{1}{x^2+4x-5}\,dx$

$x^2+4x+2-2-5$

$(x+2)^2-9$

$\frac{4}{2}=2^2$

$\frac{1}{2}\arctan\left(\frac{x+2}{3}\right)+C$

$\int \frac{x}{x^2-10x+30}\,dx$

$x^2-10x+25-25+30$

$(x-5)^2+5$

$\frac{10}{2}=5^2$

$\frac{1}{2}\arctan\left(\frac{x-5}{5}\right)+C$

$\int \frac{1}{x^2+6x+10}\,dx$

$x^2+6x+9-9+10$

$(x+3)^2+1$

$\frac{6}{2}=3^2$

$\frac{1}{2}\arctan\left(\frac{x+3}{1}\right)+C$

$\int (x^2+8x+21)\,dx$

$x^2+8x+16-16+21$

$(x+4)^2+5$

$\frac{8}{2}=4^2$

$\frac{1}{2}\arctan\left(\frac{x+4}{5}\right)+C$

$\int \frac{1}{x^2+2x-8}\,dx$

$x^2+2x+1-1-8$

$(x+1)^2-7$

$\frac{2}{2}=1^2$

$\frac{1}{2}\ln\left(\frac{x+1}{7}\right)+C$

$\int \frac{1}{x^2-8x+20}\,dx$

$x^2-8x+16-16+20$

$(x-4)^2+4$

$\frac{1}{2}\arctan\left(\frac{x-4}{2}\right)+C$

$\int \frac{1}{x^2+12x+27}\,dx$

$x^2+12x+36-36+27$

$(x+6)^2-9$

$\frac{1}{6}\ln\left(\frac{x+6-3}{x+6+3}\right)$

$=\frac{1}{6}\ln\left(\frac{x-3}{x+9}\right)+C$

$\int \frac{1}{x^2-10x+16}\,dx$ $\quad x^2-10x+25-25+16$

$(x-5)^2-9$

$=\frac{1}{6}\ln\left(\frac{x-5-3}{x-5+3}\right)=\frac{1}{6}\ln\left(\frac{x-8}{x+2}\right)+C$