

TAREA Plataforma III Unidad

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$$\int \frac{1}{x^2 + 4x - 5} dx \quad \begin{array}{l} u = x + 2 \\ du = dx \end{array}$$

$$x^2 + 4x - 5 = (x + 2)^2 - 9$$

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

$$\int \frac{1}{u^2 - 3^2} du = \frac{1}{6} \ln \left| \frac{u - 3}{u + 3} \right| + C$$

$$\frac{1}{6} \ln \left| \frac{x + 1}{x + 5} \right| + C$$

$$I = \int \frac{x}{x^2 - 10x + 20} dx$$

$$u = x - 5 \quad dx = du$$

$$x^2 - 10x + 20 = (x - 5)^2 + 5 = u^2 + 5$$

$$\int \frac{u+5}{u^2+5} du = \int \frac{u}{u^2+5} du + \int \frac{5}{u^2+5} du$$

$$\int \frac{u}{u^2+5} du = \frac{1}{2} \ln |u^2+5| \quad \int \frac{5}{u^2+5} du$$

$$\frac{5}{\sqrt{5}} \left(\frac{1}{\sqrt{5}} \right) = \frac{1}{2} \ln |x^2 - 10x + 20| + \sqrt{5} (x - 5) + C$$

0 ————— 0 ————— 0 ————— 0 ————— 0 —————

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

$$x^2 + 6x + 10 = (x + 3)^2 + 1$$

$$\int \frac{1}{(x+3)^2 + 1} dx = \arctan (x+3) + C$$

$$4) \int (x^2 + 8x + 2) dx$$

$$\checkmark \quad 2 - x = 0$$

$$\int (x^2 + 8x + 2) dx = \frac{x^3}{3} + 4x^2 + 2x + C$$

$$\frac{x^3}{3} + 4x^2 + 2x + C$$

$$0 \quad \frac{2}{2} \quad \frac{0}{2} \quad \frac{1}{1} = \frac{0}{2}$$

$$5) \int \frac{1}{x^2 + 2x - 8} dx$$

$$x^2 + 2x - 8 = (x+4)(x-2)$$

$$\int \frac{1}{(x+4)(x-2)} dx = \frac{1}{6} \ln \left| \frac{x-2}{x+4} \right| + C$$

$$\frac{1}{6} \ln \left| \frac{x-2}{x+4} \right| + C$$

$$0 + (0+8) \text{ not } 0 = x^2$$

$$6 \div \int \frac{1}{x^2 - 8x + 20}$$

$$x^2 - 8x + 20 = (x-4)^2 + 4$$

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

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

$$7 \div \int \frac{1}{x^2 + 12x + 27}$$

$$x^2 + 12x + 27 = (x+6)^2 - 9$$

$$\int \frac{1}{(x+6)^2 - 9} dx = \frac{1}{6} \ln \left| \frac{x+9-3}{x+6+3} \right| + C$$

$$\frac{1}{6} \ln \left| \frac{x+6}{x+9} \right| + C$$

$$8 \int \frac{1}{x^2 - 10x + 16} dx$$

$$x^2 - 10x + 16 = (x-2)(x-8)$$

$$2 + \left(\frac{N-x}{5} \right) \text{ mod } 5$$

P
2

$$N + 5(N-x) = 50 + 10 - 5x$$

$$\frac{1}{5} = 10$$

$$N + 5(N-x)$$

$$2 + \left(\frac{N-x}{5} \right) \text{ mod } 5$$

$$50 + 10 - 5x$$

$$P - 5(N-x) = 50 + 10 - 5x$$

$$2 + \left(\frac{N-x}{5} \right) \text{ mod } 5$$

$$50 + 10 - 5x$$

$$2 + \left(\frac{N-x}{5} \right) \text{ mod } 5$$