

Nombre completo:

Resuelve las siguientes integrales, revisa en el ejemplo la estructura para tus respuestas, simplifica los resultados

$$\begin{aligned}
 \int (2x - 1)^3 dx &= \int (8x^3 - 12x^2 + 6x - 1) dx \\
 &= 8 \int x^3 dx - 12 \int x^2 dx + 6 \int x dx - \int dx \\
 &= \frac{8x^4}{4} - \frac{12x^3}{3} + \frac{6x^2}{2} - x + cte = 2x^4 - 4x^3 + 3x^2 - x + cte
 \end{aligned}$$

$$\begin{aligned}
 \int (2x^3 - 5x^2 + 8x - 20) dx &= \boxed{\int} \boxed{\int} - \boxed{\int} \boxed{\int} + \boxed{\int} \boxed{\int} - \boxed{\int} \boxed{\int} \\
 &= \frac{\boxed{x^4}}{\boxed{4}} - \frac{\boxed{x^3}}{\boxed{3}} + \frac{\boxed{x^2}}{\boxed{2}} - \boxed{x} + \boxed{c} = \frac{\boxed{x^4}}{\boxed{4}} - \frac{\boxed{x^3}}{\boxed{3}} + \boxed{x^2} - \boxed{x} + \boxed{c}
 \end{aligned}$$

$$\begin{aligned}
 \int \left( \frac{1}{x} - \frac{1}{x^2} + \frac{5}{x} - \frac{8}{x^4} \right) dx &= \int \boxed{-} \boxed{\int} - \int \boxed{-} \boxed{\int} + \int \boxed{-} \boxed{\int} - \int \boxed{-} \boxed{\int} \\
 &= \int \boxed{-} \boxed{\int} - \int \boxed{-} \boxed{\int} + \int \boxed{-} \boxed{\int} - \int \boxed{-} \boxed{\int} \\
 &= \boxed{1} \boxed{|} \boxed{\int} - \boxed{\int} \boxed{|} \boxed{\int} + \boxed{5} \boxed{|} \boxed{\int} - \boxed{\int} \boxed{|} \boxed{\int} + \boxed{8} \boxed{|} \boxed{\int} \\
 &= \boxed{1} \boxed{|} \boxed{\int} + \boxed{-} \boxed{\int} + \boxed{5} \boxed{|} \boxed{\int} + \boxed{\int} \boxed{|} \boxed{\int} + \boxed{8} \boxed{|} \boxed{\int}
 \end{aligned}$$

$$\begin{aligned}
 \int \left( 4x^3 - \frac{1}{x} + 3 \cos x - e^x + 1 \right) dx &= \boxed{\int} \boxed{\int} \boxed{\int} - \int \boxed{-} \boxed{\int} + \boxed{\int} \boxed{\int} - \int \boxed{\int} \boxed{\int} + \int \boxed{\int} \\
 &= \frac{\boxed{x^4}}{\boxed{4}} - \boxed{\int} \boxed{|} \boxed{\int} + \boxed{\int} \boxed{\int} - \boxed{\int} \boxed{|} \boxed{\int} + \boxed{x} + \boxed{1} \\
 &= \boxed{1} \boxed{|} \boxed{\int} - \boxed{\int} \boxed{|} \boxed{\int} + \boxed{\int} \boxed{\int} - \boxed{\int} \boxed{|} \boxed{\int} + \boxed{x} + \boxed{1}
 \end{aligned}$$

$$\int \frac{x^3 + 27}{x + 3} dx = \int \frac{(\boxed{\phantom{0}})(\boxed{\phantom{0}} - \boxed{\phantom{0}} + \boxed{\phantom{0}})}{\boxed{\phantom{0}}} dx = \int \boxed{\phantom{0}} - \boxed{\phantom{0}} + \boxed{\phantom{0}} dx$$
$$= \int \boxed{\phantom{0}} - \int \boxed{\phantom{0}} + \int \boxed{\phantom{0}} = \boxed{\phantom{0}} - \boxed{\phantom{0}} + \boxed{\phantom{0}} + \boxed{\phantom{0}}$$

$$\int \frac{x^2 - 8x + 15}{x - 3} dx = \int \left( \frac{(\boxed{\phantom{0}})(\boxed{\phantom{0}})}{\boxed{\phantom{0}}} \right) dx = \int (\boxed{\phantom{0}}) dx = \int \boxed{\phantom{0}} - \int \boxed{\phantom{0}}$$
$$= \boxed{\phantom{0}} - \boxed{\phantom{0}} + \boxed{\phantom{0}}$$

$$\int (4x + 1)^2 dx = \int (\boxed{\phantom{0}} + \boxed{\phantom{0}} + \boxed{\phantom{0}}) dx = \boxed{\phantom{0}} \int \boxed{\phantom{0}} + \boxed{\phantom{0}} \int \boxed{\phantom{0}} + \int \boxed{\phantom{0}}$$
$$= \boxed{\phantom{0}} + \boxed{\phantom{0}} + \boxed{\phantom{0}} + \boxed{\phantom{0}} = \boxed{\phantom{0}} + \boxed{\phantom{0}} + \boxed{\phantom{0}} + \boxed{\phantom{0}}$$