

Nombre:

Resuelve las siguientes integrales por cambio de variable.

1.

$$\int (3x + 5)^7 dx = \int \boxed{}^{\boxed{}} \boxed{}^{\boxed{}} = \boxed{}^{\boxed{}} \int \boxed{}^{\boxed{}} \boxed{}^{\boxed{}} = \boxed{}^{\boxed{}} \cdot \boxed{}^{\boxed{}} = \boxed{}^{\boxed{}} \rightarrow \frac{(\boxed{})^{\boxed{}}}{\boxed{}}$$

sustituye u, du simplifica integra simplifica sustituye

$$u = \boxed{}$$

$$du = \boxed{}$$

$$dx = \frac{\boxed{}}{\boxed{}}$$

$$\int (3x + 5)^7 dx = \frac{(\boxed{})^{\boxed{}}}{\boxed{}} + \boxed{}$$

2.

$$\int \sin^2 3x \cos 3x dx = \int (\boxed{})^{\boxed{}} \boxed{}^{\boxed{}} = \int \boxed{}^{\boxed{}} \boxed{}^{\boxed{}} \frac{\boxed{}}{\boxed{}}$$

$$= \frac{\boxed{}}{\boxed{}} \int \boxed{}^{\boxed{}} \boxed{}^{\boxed{}} = \frac{\boxed{}}{\boxed{}} \cdot \boxed{}^{\boxed{}} = \frac{\boxed{}}{\boxed{}} \rightarrow \frac{(\boxed{})^{\boxed{}}}{\boxed{}}$$

cambia el exponente sustituye u, du

simplifica integra simplifica sustituye

$$u = \boxed{}$$

$$du = \boxed{}$$

$$dx = \frac{\boxed{}}{\boxed{}}$$

Utiliza para la función seno del ángulo la sílaba: sin

$$\int \sin^2 3x \cos 3x dx = \frac{(\boxed{})^{\boxed{}}}{\boxed{}} + \boxed{}$$

3.

$$\int x^2 \sqrt[4]{(x^3 + 1)^3} dx = \int \boxed{}^{\boxed{}} (\boxed{} + \boxed{})^{\frac{\boxed{}}{\boxed{}}} \boxed{}^{\boxed{}} = \int \boxed{}^{\boxed{}} (\boxed{})^{\frac{\boxed{}}{\boxed{}}} \frac{\boxed{}}{\boxed{}} = \frac{\boxed{}}{\boxed{}} \int \boxed{}^{\boxed{}} \boxed{}^{\frac{\boxed{}}{\boxed{}}} = \frac{\boxed{}}{\boxed{}} \cdot \frac{\boxed{}^{\frac{\boxed{}}{\boxed{}}}}{\boxed{}}$$

$$= \frac{\boxed{}}{\boxed{}} = \frac{\boxed{}}{\boxed{}} = \frac{\boxed{} \sqrt[4]{\boxed{}}}{\boxed{}} \rightarrow \frac{\boxed{} \sqrt[4]{(\boxed{} + \boxed{})^{\boxed{}}}}{\boxed{}}$$

cambia la raíz sustituye u, du simplifica integra

multiplica simplifica cambia a raíz sustituye

$$u = \boxed{} + \boxed{}$$

$$du = \boxed{}^{\boxed{}} \boxed{}^{\boxed{}}$$

$$dx = \frac{\boxed{}}{\boxed{}}$$

$$\int x^2 \sqrt[4]{(x^3 + 1)^3} dx = \frac{\boxed{} \sqrt[4]{(\boxed{} + \boxed{})^{\boxed{}}}}{\boxed{}} + \boxed{}$$