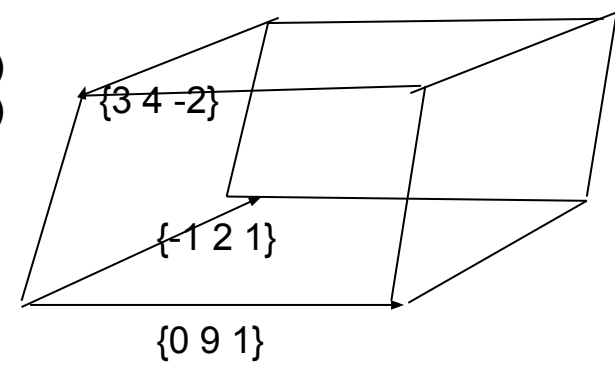


$$\int [\sin^3 x \cdot \cos x] dx = \int [\sin^2 x \cdot \sin x \cdot \cos x] dx = \int [\sin^2 x] d(\sin x) = \int [t^2] dt = (t^3)/3 + C = (\sin^3 x)/3 + C$$

$$\cos x dx = d(\sin x)$$

$$\sin x = t$$

$$\begin{pmatrix} 3 & 4 & -2 \\ -1 & 2 & 1 \\ 0 & 9 & 1 \end{pmatrix}$$



$$\int \sin^3 x dx = \int [\sin^2 x \cdot \sin x] dx = \int [\sin^2 x] d(-\cos x) = -1 \int [\sin^2 x] d(\cos x) = -1 \int [1 - \cos^2 x] d(\cos x) = -1 \int [1 - t^2] dt = -1 (\int [1] dt - \int [t^2] dt) = \int [t^2] dt - t + C = t^3/3 - t + C = \cos^3 x / 3 - \cos x + C$$

$$-\sin x dx = d(\cos x)$$

$$\sin x dx = -d(\cos x)$$

$$\sin x dx = d(-\cos x)$$

$$\int \frac{dx}{(x-a)} = \int \frac{d(x-a)}{(x-a)} = \int \frac{dt}{t} = \ln|t| + C = \ln|x-a| + C$$

$$x-a = t$$

$$\cos x = t$$

$$\int (e^{-3x}) dx = \int [e^{-2x} \cdot e^{-x}] dx = (-1) \int [e^{-2x}] d(e^{-x}) = -1 \int [t^2] dt = -1 \cdot t^3/3 + C = (-e^{-3x})/3 + C$$

$$e^{-x} = t$$

$$(e^{-x})' = e^{-x} \cdot (-1)$$

$$d(e^{-x}) = e^{-x} \cdot (-1) dx$$

$$\int (e^{-3x}) dx = (-1/3) \int (e^{-3x}) d(-3x) = (-1/3) \int (e^t) dt = -1/3 e^t + C = -1/3 e^{-3x} + C$$

$$-3x = t$$