

Calculus I

Indefinite integral of rational monomial, part 4

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Example

Integrate.

$$\begin{aligned}\int \frac{1}{\sqrt[3]{x^4}} dx &= \int x^{-\frac{4}{3}} dx \\ &= \frac{x^{-\frac{4}{3}+1}}{-\frac{4}{3}+1} + C \\ &= \frac{x^{-\frac{1}{3}}}{-\frac{1}{3}} + C \\ &= -3x^{-\frac{1}{3}} + C\end{aligned}$$