

Indefinite integral example

Calculate indefinite integral of function below

$$\int \frac{2}{\cos^2(3 \cdot x)} \cdot dx$$

$$\int \frac{2}{\cos^2(3 \cdot x)} \cdot dx = \left\{ \begin{array}{l} 3 \cdot x = t \\ 3 \cdot dx = dt \\ dx = \frac{dt}{3} \end{array} \right.$$

$$\int \frac{2}{\cos^2 t} \cdot \frac{dt}{3} = \frac{2}{3} \cdot \int \frac{1}{\cos^2 t} \cdot dt =$$

$$= \frac{2}{3} \cdot \tan t + C = \frac{2}{3} \cdot \tan 3 \cdot x + C$$

$$\frac{2}{3} \cdot \tan 3 \cdot x + C$$