

Умножить на 1

№ 8129

$$\int \frac{dx}{x^2 \sqrt{x}} = \int x^{-2 \cdot 1/2} dx = \frac{x^{-1/2}}{-1/2} + C = -\frac{2}{\sqrt{x}} + C$$

№ 8130

$$\int \frac{dx}{x^2 + 3} = \frac{1}{\sqrt{3}} \arctg \frac{x}{\sqrt{3}} + C$$

№ 8131

$$\int \frac{1}{5^x} dx = \frac{(1/5)^x}{\ln 1/5} + C$$

№ 8132

$$\int \frac{dx}{\sqrt{4-x^2}} = \arcsin x/2 + C$$

№ 8133

$$\int \frac{dx}{\sqrt{x^2-1}} = \ln |x + \sqrt{x^2-1}| + C$$

№ 8134

$$\int \frac{dx}{x^2-25} = \frac{1}{10} \ln \left| \frac{x-5}{x+5} \right| + C$$

№ 8135

$$\begin{aligned} \int (x + \frac{2}{x})^2 dx &= \int (x^2 + 4 + 4/x^2) dx = \int x^2 dx + \int 4 dx + 4 \int x^{-2} dx \\ &= x^3/3 + 4x + 4x^{-1} \cdot (-1) + C = x^3/3 + 4x - 4/x + C \end{aligned}$$

№ 8136

$$\int \frac{dx}{4x^2+1} = \frac{1}{4} \int \frac{dx}{x^2+1} = \frac{1}{4} \cdot \frac{1}{1} \cdot \arctg \frac{x}{1} + C = \frac{1}{4} \arctg x + C$$