

Integrace metodou substituce

$$1) \int x \operatorname{tg}(1-x^2) dx = \frac{1}{2} \ln |\cos(1-x^2)| + c$$

$$2) \int \frac{dx}{x\sqrt{1-\ln^2 x}} = \arcsin(\ln x) + c$$

$$3) \int \sin(\ln x) \cdot \frac{1}{x} dx = -\cos(\ln x) + c$$

$$4) \int \frac{2x^2}{\cos^2(x^3+1)} dx = \frac{2}{3} \operatorname{tg}(x^3+1) + c$$

$$5) \int \frac{x}{\cos^2(x^2)} dx = \frac{1}{2} \operatorname{tg} x^2 + c$$

$$6) \int x \sin(1-x^2) dx = \frac{1}{2} \cos(1-x^2) + c$$

$$7) \int \frac{\sin x}{\sqrt{\cos^3 x}} dx = \frac{2}{\sqrt{\cos x}} + c$$

$$8) \int \frac{\sin x}{\sqrt{2+\cos x}} dx = -2\sqrt{2+\cos x} + c$$

$$9) \int \frac{\cos^3 x}{\sin^2 x} dx = -\frac{1}{\sin x} - \sin x + c$$

$$10) \int \sin^5 x dx = -\cos x + \frac{2}{3} \cos^3 x - \frac{1}{5} \cos^5 x + c$$

$$11) \int \frac{\sin^3 x}{2+\cos x} dx = \frac{1}{2} \cos^2 x - 2 \cos x + 3 \ln |\cos x + 2| + c$$

$$12) \int \frac{\cos x}{\sin^2 x + 2} dx = \frac{1}{\sqrt{2}} \operatorname{arctg} \frac{\sin x}{\sqrt{2}} + c$$

$$13) \int \frac{2}{x\sqrt{x+3}} dx = -\frac{2}{\sqrt{3}} \ln \left| \frac{\sqrt{3} + \sqrt{x+3}}{\sqrt{3} - \sqrt{x+3}} \right| + c$$

$$14) \int \frac{\sqrt{x-3}}{2x} dx = \sqrt{x-3} - \frac{3}{\sqrt{3}} \operatorname{arctg} \sqrt{\frac{x-3}{3}} + c$$

$$15) \int \frac{1}{(1-x)\sqrt{x-5}} dx = -\operatorname{arctg} \frac{\sqrt{x-5}}{2} + c$$

$$16) \int \frac{1}{(2+x)\sqrt{1+x}} dx = 2\operatorname{arctg} \sqrt{1+x} + c$$

$$17) \int \frac{1}{1+\sqrt{x+1}} dx = 2\sqrt{x+1} - 2\ln(1+\sqrt{x+1}) + c$$