

$$1. \int dx = x + c$$

$$11. \int \frac{dx}{\sin x} = \ln \left| \operatorname{tg} \frac{x}{2} \right| + c$$

$$2. \int x^{\alpha} dx = \frac{x^{\alpha+1}}{\alpha+1} + c, \alpha \neq -1$$

$$12. \int \frac{dx}{a^2 + x^2} = \begin{cases} \frac{1}{a} \operatorname{arctg} \frac{x}{a} + c \\ -\frac{1}{a} \operatorname{arctg} \frac{x}{a} + c \end{cases}$$

$$3. \int a^x dx = \frac{a^x}{\ln a} + c$$

$$13. \int \frac{dx}{x^2 - a^2} = \frac{1}{2a} \ln \left| \frac{x-a}{x+a} \right| + c$$

$$4. \int \frac{dx}{x} = \ln |x| + c$$

$$14. \int \frac{dx}{a^2 - x^2} = \frac{1}{2a} \ln \left| \frac{a+x}{a-x} \right| + c$$

$$5. \int \cos x dx = \sin x + c$$

$$15. \int \frac{dx}{\sqrt{a^2 - x^2}} = \begin{cases} \operatorname{arcsin} \frac{x}{a} + c \\ -\operatorname{arccos} \frac{x}{a} + c \end{cases}$$

$$6. \int \sin x dx = -\cos x + c$$

$$16. \int \frac{dx}{\sqrt{x^2 \pm a^2}} = \ln \left| x + \sqrt{x^2 \pm a^2} \right| + c$$

$$7. \int \frac{dx}{\cos^2 x} = \operatorname{tg} x + c$$

$$17. \int \operatorname{sh} x dx = \operatorname{ch} x + c$$

$$8. \int \frac{dx}{\sin^2 x} = -\operatorname{ctg} x + c$$

$$18. \int \operatorname{ch} x dx = \operatorname{sh} x + c$$

$$9. \int \frac{dx}{\sin x} = \ln \left| \operatorname{tg} \frac{x}{2} \right| + c$$

$$19. \int \frac{dx}{\operatorname{ch}^2 x} = \operatorname{th} x + c$$

$$10. \int \frac{dx}{\cos x} = \ln \left| \operatorname{tg} \left(\frac{x}{2} + \frac{\pi}{2} \right) \right| + c$$

$$20. \int \frac{dx}{\operatorname{sh}^2 x} = -\operatorname{cth} x + c$$