

1. Ορισμός

$$\int f(x)dx = F(x) + c \quad \Leftrightarrow \quad F'(x) = f(x)$$

2. Βασικά αόριστα ολοκληρώματα

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

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

$$3. \int \frac{dx}{x} \ln |x| + c, \quad x \neq 0$$

$$4. \int e^x dx = e^x + c$$

$$5. \int a^x dx = \frac{a^x}{\ln a} + c, \quad a \in \mathbb{R}^+ - \{1\}$$

$$6. \int \eta \mu x dx = -\sigma \nu x + c$$

$$7. \int \sigma \nu x dx = \eta \mu x + c$$

$$8. \int \epsilon \phi x dx = -\ln |\sigma \nu x| + c = \ln |\tau \epsilon \mu x| + c$$

$$9. \int \sigma \phi x dx = \ln |\eta \mu x| + c$$

$$10. \int \tau \epsilon \mu x dx = \ln |\tau \epsilon \mu x + \epsilon \phi x| + c$$

$$11. \int \sigma \tau \epsilon \mu x dx = \ln |\sigma \tau \epsilon \mu x + \sigma \phi x| + c$$

$$12. \int \tau \epsilon \mu^2 x dx = \epsilon \phi x + c$$

$$13. \int \sigma \tau \epsilon \mu^2 x dx = -\sigma \phi x + c$$

$$14. \int \tau \epsilon \mu x \epsilon \phi x dx = \tau \epsilon \mu x + c$$

$$15. \int \sigma \tau \epsilon \mu x \sigma \phi x dx = -\sigma \tau \epsilon \mu x + c$$

$$16. \int \frac{dx}{\sqrt{1-x^2}} = \text{Τοξ}\eta \mu x + c$$

$$17. \int \frac{dx}{1+x^2} = \text{Τοξ}\epsilon \phi x + c$$

$$18. \int \frac{dx}{1-x^2} = \frac{1}{2} \ln \left| \frac{1+x}{1-x} \right| + c$$