Parciális integrálás

Tétel: $\int \boldsymbol{u'} \cdot \boldsymbol{v} = \boldsymbol{u} \cdot \boldsymbol{v} - \int \boldsymbol{u} \cdot \boldsymbol{v'}$

Példák

a. $\int x \cdot e^x \, dx =$ *b.* $\int sin^2 x \, dx =$

Gyakorló feladatok

a) $\int x \cdot sinx \, dx =$

b) $\int x \cdot cosx \, dx =$

c) $\int lnx \, dx =$

d) $\int x^2 \cdot sinx$ dx =

e) $\int \frac{lnx}{x} dx =$

f) $\int x^2 \cdot e^x \, dx =$

g) $\int x \cdot lnx \, dx =$

h) $\int e^{-x} \cdot x \, dx =$

i) $\int e^x \cdot cosx \, dx =$

j) $\int e^x \cdot sinx \, dx =$

k) $\int cos^2 x \, dx =$

Vegyes integrálás

1. $\int \frac{1}{4x-3} \, dx =$
2. $\int 12 \cdot x^2 \cdot (x^3+1)^3 \, dx =$
3. $\int sinx \cdot cosx \, dx =$
4. $\int (1 + e^{x-1}) \, dx =$
5. $\int \frac{x-2}{x \cdot (x-4)} \, dx =$
6. $\int ctgx \, dx =$
7. $\int \frac{dx}{sin2x} =$
8. $\int \frac{dx}{\sqrt{x} \cdot (\sqrt{x}+1)} =$
9. $\int \frac{e^x+1}{e^x+e^{-x}+2} \, dx =$
10. $\int \frac{sinx}{\sqrt[3]{cos^2 x}} \, dx =$
11. $\int cos^3 x \cdot sin^4 \, dx =$ =
12. $\int \frac{x^2}{\sqrt[3]{1-x^3}} \, dx =$
13. $\int x^3 \cdot e^x \, dx =$
14. $\int (2x+1) \cdot e^{x+1} \, dx =$
15. $\int 2 \cdot e^{-x} \, dx$
16. $\int \frac{lnx}{x} \, dx =$