

Per partes (integration by parts)

7. $\int (x^2 - 1)e^x \, dx$

8. $\int x \arctan x \, dx$

Substitution (I)

1. $\int \cos(3x - 2) \, dx$

3. $\int \frac{3x^2}{x^3+1} \, dx$

5. $\int \frac{1}{\sqrt{4-x^2}} \, dx$

7. $\int r\sqrt{1-r^2} \, dr$

9. $\int \frac{\sqrt{\ln x}}{x} \, dx$

11. $\int \frac{\sin \varphi}{\cos^2 \varphi} \, d\varphi$

13. $\int (x+1)\sqrt{x^2+2x} \, dx$

2. $\int \frac{1}{1-x} \, dx$

4. $\int \frac{x}{\sqrt{x^2+1}} \, dx$

6. $\int \frac{1}{4+9x^2} \, dx$

8. $\int \frac{e^{\sqrt{x}}}{\sqrt{x}} \, dx$

10. $\int \frac{e^{2x}}{2+e^{2x}} \, dx$

12. $\int e^{-x^3} x^2 \, dx$

14. $\int \frac{\ln x}{x(1-\ln^2 x)} \, dx$

Combination of both methods

15. $\int x^2 e^{3x} \, dx$

17. $\int \frac{3x}{\sqrt{2x+1}} \, dx$

16. $\int x \sin(5x+1) \, dx$

18. $\int \frac{x^3}{\sqrt{1+2x^2}} \, dx$