

Calculus 2
Calculus of Exponential Functions
Integration

Perform the following integrals

1. $\int e^{2\pi x} dx$

2. $\int e^{\pi x} dx$

3. $\int e^{-\pi x} dx$

4. $\int e^{-2\pi x} dx$

5. $\int (e^{\pi x} + 1) dx$

6. $\int (e^{-\pi x} - 2) dx$

7. $\int x e^{x^2} dx$

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

9. $\int \cos(x) e^{\sin(x)} dx$

10. $\int \sin(x) e^{\cos(x)} dx$

11. $\int x e^{-x^2} dx$

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

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

14. $\int \frac{e^{\frac{1}{x}}}{x^2} dx$

15. $\int e^{7x-5} dx$

16. $\int x e^{2x^2} dx$

17. $\int \frac{e^x}{1+2e^x+e^{2x}} dx$

18. $\int (e^x + e^{-x}) dx$

19. $\int \frac{e^{2x}-e^{4x}}{e^x} dx$

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

21. $\int e^x (e^{2x} + 1)^3 dx$

22. $\int e^x \cos(e^x) dx$

23. $\int e^x \sqrt{e^x + 1} dx$

24. $\int (\sqrt{e})^x dx$