

Evaluate the following integrals

1. $\int_1^{e^3} \ln(2x) dx$

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

3. $\int \frac{5}{\sqrt{5-4x-x^2}} dx$
Hint: Complete the square

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

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

6. $\int \tan(x) dx$

7. $\int \frac{\sqrt{x}}{1+\sqrt{x}} dx$

8. $\int \arctan(x) dx$

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

10. $\int x^5 e^{x^3} dx$