

Compute the following integrals.

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

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

3.  $\int \frac{1}{x \ln x} dx$

4.  $\int \ln(4 - x^2) dx$

5.  $\int x^2 \arctan x dx$

6.  $\int \frac{1}{x^2 \sqrt{x^2 - 9}} dx$

7.  $\int \frac{x^3 + 6x^2 + 13x + 8}{x^2 + 4x} dx$