

Calculus I

Practice

Evaluate the integrals:

1.
$$\int \sqrt{x}e^{\sqrt{x}} dx = ?$$

2.
$$\int \frac{\sqrt{\ln x}}{x} dx = ?$$

3.
$$\int \frac{x}{x+4} dx = ?$$

4.
$$\int (\ln x)^3 dx = ?$$

5.
$$\int \frac{\ln x}{x} dx = ?$$

6.
$$\int \ln(x^2) dx = ?$$

7.
$$\int \frac{3x}{x^2 - 3x - 4} dx = ?$$

8.
$$\int \frac{-2x^2 + 4}{x^3 + 2x^2 + x} dx = ?$$

Evaluate the definite integrals:

1.
$$\int_1^4 \sqrt{x}e^{\sqrt{x}} dx = ?$$

2.
$$\int_1^e (\ln x)^3 dx = ?$$

3.
$$\int_{-1}^1 \frac{1}{x^2} dx = ?$$