

Sections 5.5: Additional Problems

Compute

1. $\int e^{kx} dx$, where k is some non-zero constant.

2. $\int \sin(kx) dx$, where k is some non-zero constant.

3. $\int x^3(x^2 - 1)^4 dx =$

4. $\int (12x^2 + 8)(x^3 + 2x)^6 dx$

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

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

7. $\int_0^{\pi/3} \sin(\theta) \cos^2(\theta) d\theta =$

8. If f is continuous and $\int_0^4 f(x) dx = 16$, find $\int_0^2 x f(x^2) dx$.