

1. Compute $\int e^{4x-9} dx$

2. Compute $\int x \sin(x^2 + 1) dx$

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

4. Compute $\int_1^4 \frac{e^{\sqrt{x}}}{\sqrt{x}} dx$.

5. Compute $\int \frac{\arctan(x)}{1+x^2} dx$

6. Compute $\int \frac{x^3}{\sqrt{1-x^4}} dx$

7. Compute $\int \frac{x}{\sqrt{1-x^4}} dx.$