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