1. Using three approximating rectangles and midpoints, to approximate the area under the graph of \( f(x) = \frac{x + 1}{x} \) from \( x = 1 \) to \( x = 7 \).

2. Using the definition of the definite integral, to find the value of the limit

\[
\lim_{n \to \infty} \sum_{i=1}^{n} \frac{2}{n} \sqrt{1 + \frac{2i}{n}}
\]
3. By interpreting it as an area, find the value of the integral

\[ \int_{0}^{1} (|x + 1| + 2\sqrt{1 - x^2})dx \]

4. Find the slope of the tangent line to the graph of the function

\[ f(x) = \int_{0}^{\sec(x)} \frac{1}{t^2 - 1} dt \]

at \( x = \frac{\pi}{4} \).
5. Find the value of the integral \( \int e^{2x} \sqrt{1+e^x} \, dx \)

6. Suppose \( f \) is odd function on \( \mathbb{R} \), such that \( \int_{-2}^{1} f(x) \, dx = 2 \) and \( \int_{-3}^{3} f(x) \, dx = 5 \).

Find \( \int_{-3}^{-1} f(x) \, dx \)