1. Use the substitution \( x = 2 \tan \theta \) to evaluate the integral
\[
\int \frac{1}{x^2 \sqrt{x^2 + 4}} \, dx.
\]
Remember that your answer should be in terms of \( x \) and not \( \theta \).

2. Use the substitution \( t = 3 \sec \theta \) to evaluate the definite integral
\[
\int_3^6 \frac{1}{t \sqrt{t^2 - 9}} \, dt.
\]