**Problem 1.** If  $\theta = \sec^{-1} x$ , then what is  $\tan \theta$ ?

**Problem 2.** Compute  $\int \frac{1}{(x^2 - 4)^{3/2}} dx$ .

Problem 3. Compute  $\int \frac{x}{(x^2-4)^{3/2}} dx$ .