In the space provided, please write your solution to the following exercises. Show all of your work and not just the final conclusion. Remember to use good notation. The majority of the credit you receive will be based on the completeness and the clarity of your responses.

1. (5 points) Use the Change-Of-Variables Formula to evaluate the definite integral $\displaystyle\int_0^1 (x+1)(x^2+2x)^5\,dx$.

2. (5 points) Calculate the integral $\displaystyle\int \frac{dx}{\sqrt{9-16x^2}}$.