1. (3 points) Compute the following integral:

$$\int \frac{1}{(x-1)(x+1)} \, dx$$

2. (3 points) Compute the following integral:

$$\int_1^3 \frac{1}{\sqrt{|x-2|}} \, dx$$

3. (4 points) Find the length of the curve $y = \sqrt{1-x^2}$ from $x = -1/2$ to $x = 1/2$.