

1. Determine whether this integral converge or diverge $\int_1^{\infty} \frac{1}{x^2+x} dx$

2. Find $\int \frac{\tan^{-1}x}{x^2} dx$

3. Find $\int \frac{1}{1+\cos^2 x} dx$

4. Find $\int \sqrt{1+e^x} dx$

5. Evaluate $\int_0^4 \frac{6x+5}{2x+1} dx$