

Name: _____

Solve the following problems.

1. Compute $\int \frac{1}{x^2-4} dx$.

2. Compute $\int \frac{1}{x^2+6x+10} dx$.

3. Compute $\int \frac{x^3}{x^2+2} dx$.

4. Compute $\int \frac{x}{x^2-1} dx$.

5. Compute $\int \frac{dt}{2+e^{2t}}$.

6. Find a recursive formula for $\int \tan^n(x)dx$. Use it to compute $\int \tan^4(x)dx$. Hint: to find the recursive formula you do not need integration by parts but you will need a trigonometric identity.