Name: _____ _____ / **12**

- There are 12 points possible on this proficiency: **One point per problem. No partial credit.**
- A passing score is 10/12.
- You have 30 minutes to complete this proficiency.
- No aids (book, calculator, etc.) are permitted.
- You do **not** need to simplify your expressions.
- Be sure to include constants of integration when appropriate.
- Circle your final answer.

Compute the following integrals.

1. $\displaystyle\int_{\pi}^{2\pi} (\cos\theta - 1)\, d\theta$

2. $\displaystyle\int \frac{4 - 2\ln t}{t}\, dt$

3. $\displaystyle\int_{1}^{2} \frac{x^3 - 1}{x^2}\, dx$

4. $\int \tan^2 x \sec^2 x \, dx$

5. $\int \frac{1+x^2}{2} + \frac{2}{1+x^2} \, dx$

6. $\int z\sqrt{3-z} \, dz$

7. $\int (\sin\theta) e^{\cos\theta}\, d\theta$

8. $\int_{-1}^{1} (x+3)(x-2)\, dx$

9. $\int t\cos(2-5t^2)\, dt$

10. $\int \sqrt[3]{x^2} - \sqrt[3]{4}\,dx$

11. $\int \left(7e^w - \frac{1}{w^3}\right) dw$

12. $\int \frac{t^2}{t^3 - 2}\,dt$