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 60 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. $\displaystyle\int_0^3 x(x+2)\,dx$

2. $\displaystyle\int \sin(\pi\theta - 1)\,d\theta$

3. $\displaystyle\int x e^{(1-x^2)}\,dx$

4. $\displaystyle\int \frac{x^2}{2+x^3}\,dx$

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

6. $\displaystyle\int \frac{3}{\sqrt{1-x^2}}\,dx$

7. $\displaystyle\int \frac{2\sqrt{\ln(t)+2}}{t}\,dt$

8. $\displaystyle\int_0^1 \left(e^x + x^e\right)\,dx$

9. $\displaystyle\int \frac{w}{\sqrt{w+1}}\,dw$

10. $\displaystyle \int \frac{\sec^2 x}{\tan^3 x}\,dx$

11. $\displaystyle \int \left(\ln(2) - \frac{1}{z} \right) dz$

12. $\displaystyle \int \frac{\sin t}{\cos t}\,dt$