

Name: _____

Class (circle): Berman/Sus Jurkowski

- There are 12 points possible on this proficiency: one point per problem with no partial credit.
- A passing score is 10/12.
- You have 60 minutes to complete this proficiency.
- No aids (book, calculator, etc.) are permitted.
- Be sure to include constants of integration where appropriate.
- You do **not** need to simplify your expressions.
- Box your final answer.

Evaluate the integrals.

1. $\int (2x^5 - \sqrt{2}) dx$

2. $\int \left(\frac{2+t+\sqrt{t}}{\sqrt{t}} \right) dt$

3. $\int 2\theta^2 \sin(\theta^3) d\theta$

4. $\int_1^3 (x^2 - 4x + 2) dx$

5. $\int \sin(2t)(\cos(2t))^4 dt$

6. $\int \frac{\cos(1/t)}{t^2} dt$

7. $\int x\sqrt{x+2} dx$

8. $\int \left(e^x + \frac{\sec(x)\tan(x)}{2} \right) dx$

9. $\int_1^e \frac{(\ln y)^{1/3}}{y} dy$

10. $\int (x+2)(x^2+4x) dx$

11. $\int \left(\frac{2}{2w+3} + \frac{1}{1+w^2} \right) dw$

12. $\int \left(\sec^2 \left(\frac{x}{3} \right) + e^{-x} \right) dx$