

MTH 1125 2pm Class - Test #4- Solutions

FALL 2022

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Name _____

Show **CLEARLY** how you arrive at your answers!

1. **Compute:** $\int (28x^3 + 18x^2 - 10x + 6\sqrt{x} + 3) dx =$

2. **Compute:** $\int (6x^2 + 18x + 8)^4 (2x + 3) dx =$

3. **Compute:** $\int (2 \sin (x) - 5 \csc ^2 (x) + 4 \sec (x) \tan (x)) dx =$

4. **Compute:** $\int \sin (4x^3 + 9x + 8) (4x^2 + 3) dx =$

5. **Compute:** $\int_{-1}^1 (6x^3 + 9x^2 + 2) dx =$

6. **Compute:** $\int_{-1}^1 (x^3 + x + 1)^3 (3x^2 + 1) dx =$ (The answer may not be a whole number)

7. **Compute:** $\frac{d}{dx} [\ln(2x^5 + 5x^2 - 10x)] =$

Extra! (Wow! - 5 pts. Can you believe it?) **Compute:** $\frac{d}{dx} \left[\ln \left(\sqrt{\frac{3x^4 - 2x^2 + 1}{x^3 - x}} \right) \right] =$