

MTH 1125 12pm Class - Test #4

FALL 2022

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Name _____

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

1. **Compute:** $\int (16x^3 + 15x^2 - 12x + 7 + 12\sqrt{x}) dx =$

2. **Compute:** $\int (8x^2 + 12x + 5)^4 (4x + 3) dx =$

3. **Compute:** $\int (9 \cos(x) - 6 \sec^2(x) + 2 \sec(x) \tan(x)) dx =$

4. **Compute:** $\int \sin(6x^2 + 20x + 3)(3x + 5) dx =$

5. **Compute:** $\int_{-1}^1 (3x^2 + 4x + 2) dx =$

6. **Compute:** $\int_{x=0}^{x=1} (2x^2 + 1)^4 x = dx$ (The answer may not be a whole number)

7. **Compute:** $\frac{d}{dx} [\ln (12x^3 + 18x^2 - 5)] =$

Extra! (Wow! - 5 pts. Can you believe it?) **Compute:** $\frac{d}{dx} \left[\ln \left(\sqrt{\frac{12x^4 - 4x^2 + 2}{6x^3 - 5x}} \right) \right] =$