

MTH 1126 Test #3 (9am Class)

SPRING 2022

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Name _____

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

1. $\int \sin^2(x) dx =$

2. $\lim_{x \rightarrow 0} \frac{\tan(x)}{x} =$

3. $\int \frac{x+23}{x^2-3x-10} dx =$

4. $\int \sin^3(x) \cos^7(x) dx =$

5. $\int x\sqrt{9-4x^2} dx =$ (Use Trig Substitution)

6. $\lim_{x \rightarrow 0} \frac{\ln(x+1)}{e^x - 1} =$

7. $\int e^x \cos(x) dx =$ (Use Integration by Parts)

WOW! Extra (10 pts - all or nothing)

$$\int x \arctan(x) dx =$$