

MTH 1126 Test #3

SPRING 2023

Pat Rossi

Name _____

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

1. $\int \frac{5x+31}{x^2-3x-10} dx =$

2. $\lim_{x \rightarrow \infty} \frac{\ln(x)}{x^2} =$

3. $\int \frac{3x^2+2x+12}{x^3+4x} dx =$

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

5. $\int \frac{1}{x\sqrt{4-9x^2}} dx =$

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

7. $\int x \sin(2x) dx =$

WOW! Extra (10 pts - all or nothing)

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