

MTH 1126 Test #3 - Answers
SPRING 2004

Pat Rossi

Name _____

1. $\int \sin^4(x) \cos^3(x) dx = \frac{\sin^5(x)}{5} - \frac{\sin^7(x)}{7} + C$

2. $\int \sec^4(x) \tan^4(x) dx = \frac{\tan^7(x)}{7} + \frac{\tan^5(x)}{5} + C$

3. $\int \frac{x}{x^2+x-6} dx = \frac{3}{5} \ln|x+3| + \frac{2}{5} \ln|x-2| + C$

4. $\int x \ln(x) dx = \frac{1}{2}x^2 \ln(x) - \frac{1}{4}x^2 + C$

5. $\int \frac{1}{9+4x^2} dx = \frac{1}{6} \tan^{-1}\left(\frac{2x}{3}\right) + C$

6. $\int \frac{1}{\sqrt{4-9x^2}} dx = \frac{1}{3} \sin^{-1}\left(\frac{3x}{2}\right) + C$