

MTH 1126 - Test #1 - Answers
SPRING 2004

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Name _____

Instructions. Show CLEARLY how you arrive at your answers.

1. $\int \cos(x^2) x dx = \frac{1}{2} \sin(x^2) + C$

2. The area bounded by the graphs of $f(x) = x^2 - 4$ and $g(x) = 2x - 1$ is $\frac{32}{3}$

3. $\int_4^8 f(x) dx = 13$

4. $\int (2x^5 - 8)^{15} x^4 dx = \frac{(2x^5 - 8)^{16}}{160} + C$

5. The area bounded by the graphs of $f(x) = \sqrt{x}$ and $g(x) = \frac{1}{2}x$ is $\frac{4}{3}$.

6. $\frac{5}{8}$ lb ft

7. $15,000 \text{ lb ft} - 5,000 \text{ lb ft} = 10,000 \text{ lb ft}$

8. $100 \frac{\text{lb}}{\text{ft}^3} \pi (80,000 \text{ ft}^4) = 8,000,000 \pi \text{ lb ft}$