

MAT 137 (Calculus II) Sample Gateway Exam
Suggested time: 20 minutes

No notes are allowed. No calculators are allowed. No partial credit will be awarded.

Evaluate the integrals.

1. $\int_0^2 3x^2 + 4x + 5 \, dx$

2. $\int \frac{2}{1+x^2} \, dx$

3. $\int \frac{3x^2 - 1}{x^3} \, dx$

4. $\int xe^{x^2} \, dx$

5. $\int x \sin(2x) dx$

6. $\int \frac{1}{x(x-1)} dx$

7. $\int \ln(x) dx$

8. $\int \frac{\cos(x)}{4 - \sin(x)} dx$