

MATH 107
Practice gateway exams

This sheet lists questions for two practice gateway exams. You may also take practice gateway exams online at <http://calculus.unl.edu/edu/classes/math107practice/>, which will allow you to have your work graded.

PRACTICE EXAM 1

1. Compute $\int \left[\frac{3}{\sqrt{t}} + \frac{4}{\sqrt{1-t^2}} + 6 \cos(6t) \right] dt$.

2. Compute $\int_2^4 \frac{2v^3 + 3}{v^2} dv$.

3. Compute $\int \cos(5z)e^{5 \sin(5z)} dz$.

4. Compute $\int_0^1 \frac{e^u}{2 + 6e^u} du$.

5. Compute $\int (6y - 6)e^{4y} dy$.

6. Compute $\int \frac{-2u}{u^2 - 3u - 4} du$.

7. Compute $\int \frac{6u + 3}{u^2 - 6u + 18} du$.

PRACTICE EXAM 2

1. Compute $\int \left[\frac{4}{1+z^2} + 4z^2(z+z^{-5}) + 3 \sin(2z) \right] dz$.

2. Compute $\int_1^3 \frac{z^3 + 2\sqrt{z}}{z} dz$.

3. Compute $\int \cos(4y)e^{2 \sin(4y)} dy$.

4. Compute $\int_0^{\pi/6} \frac{\cos t}{5 + \sin t} dt$.

5. Compute $\int (2x - 7) \cos(x + 6) dx$.

6. Compute $\int \frac{-8v + 2}{v^2 - v - 2} dv$.

7. Compute $\int \frac{2z - 2}{z^2 + 4z + 5} dz$.