

**Calculus Practice II, Fall 2023**

Here is an opportunity for you to maintain your calculus skills over the summer. If you complete these problems, digitize your work, and submit your work to Canvas, I will send you my solutions. If you need some help with these questions, email me with your questions (willisb@unk.edu)

Completing this work is optional, and it does not enter into your class grade in any way—this work is not a bonus, extra credit, or anything like that.

1. Use a substitution to find each antiderivative.

(a)  $\int x \cos(2x) dx$

(b)  $\int \frac{x}{1+x^2} dx$

(c)  $\int x|x^2 - 1| dx$

(d)  $\int x^2 \sqrt{x^3 + 1} dx$

