

**Math 16B: Short Calculus II**  
**Winter 2018, Section 3**  
**Homework Sheet 5**  
**Due: Friday, February 23, 2018**

Submit your solutions to the following problems in lecture on the due date above. Present your work in a clean and organized fashion, either on a printed copy of this document (preferred) or a separate sheet of paper. As stated in the syllabus, late submissions will **not** be accepted.

1. Evaluate the following integrals using U-substitution.

(a)  $\int \cos(x)e^{\sin(x)} dx$

(b)  $\int x^2 \sin(x^3 + 3) dx$

(c)  $\int \frac{x^2 + 3}{\sqrt[3]{x^3 + 9x}} dx$

(d)  $\int_{\pi/4}^{\pi/2} \cot(x) dx$