Math 16B: Short Calculus II
Winter 2018, Section 3
Homework Sheet 4
Due: Monday, February 12, 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.

   (a) $\displaystyle\int_3^6 \left(x^2 + 2x + 1\right)\, dx$

   (b) $\displaystyle\int_0^\pi 21\cos(7x)\, dx$

2. Consider the following integral.

$$\int_0^\pi \sin(x)\, dx$$

   (a) Approximate the above integral using a midpoint sum with $n = 3$ subdivisions.

   (b) Compare your estimate to the exact area under the curve.