

Math 16A: Short Calculus I
Fall 2017, Section 3
Homework Sheet 4
Due: Wednesday, October 25, 2017

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. Compute the following derivatives using the derivative rules.

(a) $\frac{d}{dx}(x^5 + 2x^3 + 5x + 3)$

(b) $\frac{d}{dx}((x^2 + 2x + 3)(5x^3 + 2x + 3))$

(c) $\frac{d}{dx}\left(\frac{x^2 + 2x + 3}{5x^3 + 2x + 3}\right)$

(d) $\frac{d}{dx}(x^3 + 2x + 1)^8$

(e) $\frac{d}{dx}\sqrt{x^3 + 5x + 3}$

2. Find the equation for the tangent line to $f(x) = (2x - 3)^5$ at $x = 1$.