

**Homework Set 0 / Mock Assignment**

DUE: AUG 30, 2021 (VIA BLACKBOARD, BY 11.59PM)

**To be handed in:***Please remember that all problems will be graded!*

1. If  $a$  is an even number, and  $b$  is an odd number, is  $a + b$  even or odd? Explain.
2. Compute the 21<sup>st</sup> derivative of the function  $f(x) = x^{17} + 5x^4 - x^2 + 1$ .
3. Explain (even if heuristically) how to compute the result of the following sum:

$$1 + 2 + 3 + \cdots + 98 + 99 + 100 = ?$$