

**Name:** [1 pt]

**Problem 1.** Find the derivative of the polynomial  $f(x) = x^{100} - x^{10} + x + 1000$  . [5 pts]

**Problem 2.** A particle moves along  $x$ -axis with its displacement varying with time as  $s(t) = t^3 - 3t$ . Find the time interval when the particle is moving to the left. [5 pts]