ACMAT100 Fall 2023
Professor Manguba-Glover
Classwork 11 Name: _____

Complete as many of the following problems as you can with your table. If your entire table finishes early, you may leave early or work on homework.

(1) Determine if the following are polynomials. If they are, state its degree, leading term, and leading coefficient:

(a) $\dfrac{5x+3}{x}$

(b) $x^2 + 7x^4 + 4x + 9x^3 - 4$

(c) $2x + 3x^{-1} - 5$

(d) $x^2 - x^3 + x^4 - 5$

(2) Perform the indicated operation and simplify your answers:

(a) $\left(-7x^3 + 2x^2 - 2x + 9\right) + \left(6x^3 + 6x^2 - 5x - 10\right)$

(b) $\left(3x^3 - 4x^2 + 3x - 5\right) - \left(6x^3 - 7x^2 - 10x + 4\right)$

(c) $(5x^2y - 8xy) + (10x^2y - 11xy)$

(d) $(x^3 - 5xy + 10y^2) - (7x^3 + 10xy + 9y^2)$

(3) Perform the indicated operation and simplify your answers:

(a) $(5x+6)^2$

(b) $(x+3)(x^2-3x+9)$

(c) $(2x+3)(2x-3)$

(d) $(x+7y)(3x+5y)$