

Complete as many of the following problems as you can. You do not have to go in order. You can use a calculator to check your work but not to solve the problems.

If **your entire table** finishes early, you may leave early.

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

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

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

(c) $(5x^2y - 8xy) + (10x^2y - 11xy + 9xy^2)$

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

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

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

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

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

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

Key:

(1) (a) $-x^3 + 8x^2 - 7x - 1$

(b) $-9x^3 + 3x^2 + 13x - 9$

(c) $15x^2y - 19xy + 9xy^2$

(d) $-6x^3 - 15xy + y^2$

(2) (a) $25x^2 + 60x + 36$

(b) $x^3 + 27$

(c) $4x^2 - 9$

(d) $3x^2 + 26xy + 35y^2$