Polynomials Study Guide   Name:_____

1. Simplify $(3x^3 - 3x^2 + 4) + (x^3 - 4x^2 + 42)$	2. Simplify $(4a^3 + 3a^2 + 11a) - (2a^3 + a^2 - 9a)$
3. Simplify $(4x^2 - 2) + (6x^2 + 8x - 8)$	4. Simplify $(x^2 + 5x - 13) - (8x^2 - 6x - 9)$
5. Find the GCF $8x^5 + 24x^4 + 4x^3$	6. Find the GCF $10x^5y^4 + 20x^4y^3 - 8x^3y^3$
7. Factor out the GCF $4x^5 + 20x^4 + 12x^3$	8. Factor out the GCF $6x^5 + 36x^4 + 24x^3$
9. Simplify $4x^3(x^2 + 3)$	10. Simplify $-2x^3(x^2 + 3x - 4)$

11. Simplify	12. Simplify
$(2x + 9)(x + 4)$	$(5x + 1)(3x - 6)$

13. Simplify	14. Simplify
$(x + 3)(2x^2 - 3x + 7)$	$(4x^2 - 2x + 10)(7x + 3)$

15. Simplify

$(4x^2 - 3x + 8)(4x^2 + 3x + 3)$