Algebra I **Name: _____**

Directions: This will be a summative grade, therefore…

1. **You MUST complete the entire packet showing ALL work to receive credit.**
2. **You will be graded on the following criteria:**
   - **Completion/effort**
   - **Accuracy on answers and work shown**
3. **If you are doing the work on a separate sheet of paper, make sure to label the paper and number each question.**

Practice 9-2

Multiplying and Factoring

Simplify each product.

1. $4(a - 3)$ **2.** $-5(x - 2)$ **3.** $-3x^2(x^2 + 3x)$

4. $4x^3(x - 3)$ **5.** $-5x^2(x^2 + 2x + 1)$ **6.** $3x(x^2 - 5x - 3)$

7. $-x^2(-2x^2 + 3x - 2)$ **8.** $4d^2(d^2 - 3d - 7)$ **9.** $5m^3(m + 6)$

10. $a^2(2a + 4)$ **11.** $4(x^2 - 3) + x(x + 1)$ **12.** $4x(5x - 6)$

Find the GCF of the terms of each polynomial.

13. $8x - 4$ **14.** $15x + 45x^2$ **15.** $x^2 + 3x$

16. $4c^3 - 8c^2 + 8$ **17.** $12x - 36$ **18.** $12n^3 + 4n^2$

19. $14x^3 + 7x^2$ **20.** $8x^3 - 12x$ **21.** $9 - 27x^3$

22. $25x^3 - 15x^2$ **23.** $11x^2 - 33x$ **24.** $4n^4 + 6n^3 - 8n^2$

Practice 9-3

Multiplying Binomials

Find each product. Write in standard form.

1. $(x + 3)(2x - 5)$ **2.** $(x^2 + x - 1)(x + 1)$ **3.** $(3w + 4)(2w - 1)$

4. $(x + 5)(x + 4)$ **5.** $(2b - 1)(b^2 - 3b + 4)$ **6.** $(a - 11)(a + 5)$

7. $(2g - 3)(2g^2 + g - 4)$ **8.** $(3s - 4)(s - 5)$ **9.** $(4x + 3)(x - 7)$

10. $(x + 6)(x^2 - 4x + 3)$ **11.** $(5x - 3)(4x + 2)$ **12.** $(3y + 7)(4y + 5)$