

Name: _____

Unit 7: Polynomials & Factoring



Date: _____ Bell: _____

Homework 1: Classifying Polynomials;
Adding & Subtracting Polynomials**Directions:** Classify the following polynomials by degree and number of terms.

1. $3x + 12$

2. $-7x^2 + 4x - 1$

3. $x^3 - 8$

4. 24

5. $2x^4 - x^3 + 5x^2 + x - 7$

6. $10x$

Directions: Write the following polynomials in standard form.

7. $y^2 + 3y^4 - 7y + 2y^3 - 4$

8. $9x^4 - 2x^2 + 7x - 8x^3 + x^5 - 4$

9. $-2b^2 + 5ab + 7a^2$

10. $-3m^2n^2 + 8mn^3 + m^3n$

Directions: Find each sum or difference. **Answers must be in standard form.**

11. $(x^2 - 4x + 3) + (3x^2 - 3x - 5)$

12. $(8r^2 - 12r + 4) - (3r^2 + 5r - 1)$

13. $(2m - 3 + 7m^2) - (3 - 9m^2 - 2m)$

14. $(7p^2 + 3p) - (5p^2 + 4)$

15. $(3a^2 - a + 3) + (4a^2 - 5)$

16. $(5w^3 - w + 2w^2 + 4) + (3w^2 + 1 - 4w)$

17. $(2x^2 + 3y^2 - z^2) - (x^2 - y^2 - z^2) + (4x^2 - 3y^2)$

18. $(12 + 8k^3 + 3k - 4k^2) + (5k^3 + 15 - k + 2k^2)$

19. Find the sum of $(2x^2 - 6x - 2)$ and $(x^2 + 4x)$.

20. Subtract $(-a^2 - 5ab + 3b^2)$ from $(3a^2 - 2ab + 3b^2)$.