

Write the definitions for each of the following terms.

1. Polynomial - _____

2. Coefficient - _____

3. Term - _____

4. Degree of a term - _____

5. Degree of a polynomial - _____

6. Monomial - _____

7. Binomial - _____

8. Trinomial - _____

9. Describe the standard form of a polynomial.

10. Describe the factored form of a polynomial.

Write each polynomial in standard form. Classify the polynomial as a monomial, binomial, or trinomial. Find the degree of the polynomial.

11. $15x^3 - 9x^4 + 11x^2$

Standard Form: _____

of Terms: _____

Degree: _____

12. $8 - 9y^2$

Standard Form: _____

of Terms: _____

Degree: _____

13. $-22z^5$

Standard Form: _____

of Terms: _____

Degree: _____

14. $9 + 5a^2 - 8a$

Standard Form: _____

of Terms: _____

Degree: _____

Find the sum or difference of each polynomial. Write your answer in standard form.

15. $(5k^2 - 8k + 1) + (6k^2 + 4k + 8)$

16. $(13a^4 - 9a^3 + 2a - 7) + (7a^4 + 8a^3 - 2a^2 - 3)$

17. $(14w^2 - 2w + 8) - (11w^2 + 6w - 3)$

18. $(2j^2 + 9j - 5) - (6j^3 + 5j^2 - 4j + 8)$

Find the product of each polynomial. Write your answer in standard form.

19. $5a^2(10a^2 - 6a - 7)$

20. $(x + 5)(2x - 9)$

21. $(3x + 2)(-2x - 6)$

22. $(3m + 3)(2m^3 + 4m^2 - 6m - 8)$