

Name _____ Period _____ Date _____



Unit 4.1 – 4.5 Polynomial Review Worksheet

ALWAYS LEAVE YOUR ANSWER IN STANDARD FORM!!

Complete the chart.

	Simplify the Polynomial	Degree	Leading Coefficient	Constant
1. $5c^3 - 7c^2 - 3c^3 + 2c - 2c^3$				
2. $-4y + 3y^3 + 6y^4 - 3y^3 - 7y + 2$				

Add or Subtract then complete the chart.

	Simplify the Polynomial	Degree	Leading Coefficient	Constant
3. $(7a^4 - 6a^3 + 1) + (3a^3 - 2a + 1)$				
4. $(4x^2 - 3x + 10) + (-9x^2 + 4x - 6)$				
5. $(c^3 + 2c^2 - 5c) - (2c^3 + 4c - 1)$				

Multiply.

6. $2a^2(6a^2 - 4a - 2)$

12. $(a+8)^3$

7. $(4x-9)^2$

13. $(2x+1)(2x-1)$

8. $4x^2y(-3x^2y + xy - 9xy^2)$

14. $(x^5 + 6)^2$

9. $(x+3)(2x-7)(3x+1)$

15. $(x+4)(x^2 - x + 3)$

10. $(10x-2)(10x+2)$

16. $(5x-6)^2$

11. $(2x+3)(5x+1)$

Simplify.

17a) $-5c^2 - 7c + 6c(c-3)$

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

Evaluate using direct substitution.

18. $f(x) = 6x^3 - 2x + 1$ Find $f(2)$

19. $f(x) = 15x^{10} - 2x - 3$ Find $f(-1)$

20. $f(x) = 15x - 6$ Find $f(2)$

Evaluate using synthetic substitution.

21. $f(x) = 4x^2 - 7$ Find $f(2)$

22. $f(x) = 7x^3 - 3x^2 + 2x - 1$ Find $f(-1)$

23. $f(x) = 12x^2 + x - 10$ Find $f(2)$

24. $f(x) = x^2 - 5x - 17$ Find $f(3)$

Evaluate. Use either direct or synthetic substitution.

25. $f(x) = 12x^5 - 3$ Find $f(-1)$

26. $f(x) = x^{21} - x - 1$ Find $f(-1)$