Algebra II
Unit 2 Test 1 Review

Name _____
Date _____ **Block** _____

In the table below, state the degree and classify each polynomial by its degree. Then, determine the number of terms and classify the polynomial by the number of terms.

Polynomial	Degree	Classification by Degree	# of Terms	Classification by # of Terms
$-p^2-p^3-2p$	3	cubic	3	trinomial
-1	0	constant	1	monomial
$7+4m^2$	2	quadratic	2	binomial
$x^4-3x+2x^2-1$	4	quartic	4	polynomical

Add or subtract. Write your answer in standard form.

1. $(5x^2-6x+10)-(9x^2-4x+3)$

2. $(7x^2+3x-10)-(12x^2+6x+3)$

3. $(5x^2-15x-13)+(9x^2-4x-6)$

4. $(14x^2-x+12)+(3x^2+x-4)$

Multiply. Write your answer in standard form.

5. $(7x^3-6x-4)(2x^2)$

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

7. $(4x-6)(5x+7)$

8. $(x-3)(2x-5)$

9. $(5x^2-6)(4x^3+7x^2+2x)$

Divide using synthetic division. Write your answer in standard form.

10. $(12x^3-11x^2+7x+14)\div(x+3)$

11. $(6x^5-33x^4+150x^2-96)\div(x-4)$

12. $(7x^3-4x^2+7x+18)\div(x+2)$

13. $(2x^4-7x^3-15x-4)\div(x-4)$

For 14 – 6 use $f(x) = 2x + 3$ and $g(x) = x - 7$

14. Find $(f+g)(x)$

15. Find $(f-g)(x)$

16. Find $(fg)(x)$

17. Find $\left(\frac{f}{g}\right)(x)$

18. Find $(f \circ g)(x)$

19. Find $(g \circ f)(x)$

For 20 – 21 use $f(x) = x - 5$ and $g(x) = x^2 + 2$

20. Find $(f \circ g)(x)$

21. Find $(g \circ f)(x)$

For 22 – 27 use $f(x) = x - 5$ and $g(x) = x^2 + 2$

22. Find $(f+g)(0)$

23. Find $(f-g)(4)$

24. Find $(fg)(1)$

25. Find $\left(\frac{f}{g}\right)(-2)$

26. Find $(f \circ g)(-3)$

27. Find $(g \circ f)(5)$