

Polynomial Practice-HW

Write each polynomial in standard form. Name each polynomial by its number of terms (monomial, binomial, trinomial, polynomial) and state the degree.

		Standard Form	Name	Degree	L.C.
1.	$3x - 2x^8$	$-2x^8 + 3x$	binomial	8	-2
2.	$-x - 7x^3 - 3x^2 + 5$	$-7x^3 - 3x^2 - x + 5$	polynomial	3	-7
3.	$25x$	$25x$	monomial	1	25
4.	$-2x^2 + 6x^3 - 7x$	$6x^3 - 2x^2 - 7x$	trinomial	3	6
5.	$-7x^3 - 4x + 6$	$-7x^3 - 4x + 6$	trinomial	3	-7

*Add or subtract the polynomials.

6. $(3x^2 - 5x + 7) + (-x^2 + 2x - 10)$

7. $(8x + 6x^2 + 2) + (9x^2 - 7x - 6)$

8. $(7x^2 + 5x + 6) - (8x^2 - 2x + 4)$

9. $(y^2 - 7y) - (-4y^2 + 3y - 1)$

10. $(2a^3 + 9a - 2) - (a^2 + 4a - 7)$

6. $2x^2 - 3x - 3$

7. $15x^2 + 1x - 4$

8. $-1x^2 + 7x + 2$

9. $5y^2 - 10y + 1$

10. $2a^3 - a^2 + 5a + 5$

*Multiply the polynomials.

11. $4x^3(-x^2 + 6x - 2)$

12. $(5x - 2)(-3x + 4)$

13. $(5x - 2)^2$

14. $(x + 3)(x - 3)$

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

11. $-4x^5 + 24x^4 - 8x^3$

12. $-15x^2 + 26x - 8$

13. $25x^2 - 20x + 4$

14. $x^2 - 9$

15. $2x^3 - 5x^2 - 17x + 20$

*Divide each polynomial by the monomial. Make sure your answer is in simplest form!

16. $(\frac{6x^2}{9y} - \frac{18x}{9x} - \frac{9}{9x}) \div 9x$

17. $(\frac{y^2}{3y} + \frac{6y}{3y} + \frac{2}{3y}) \div 3y$

18. $(\frac{10z^4}{5z^3} + \frac{5z^3}{5z^3} - \frac{z^2}{5z^2}) \div 5z^3$

19. $(\frac{4a^2b^2}{2ab^2} - \frac{8a^3b^2}{2ab^2} + \frac{6ab}{2ab^2}) \div 2ab^2$

16. $\frac{2x}{3} - 2 - \frac{1}{x}$

17. $\frac{y}{3} + 2 + \frac{2}{3y}$

18. $2z + 1 - \frac{1}{5z}$

19. $\frac{2a - 4a^2 + 3}{b}$

6