

Name: _____ Period: _____

Score: _____/_____ _____%

HW 1-2 HONORS: Exponents & Polynomials

Adding & Subtracting – Simplify each expression.

1. $(3x^3 - 6x) + (9x^2 + 3x)$
2. $(9y^3 - 4y^2 - 2y^2 + 4) - (3y^2 + 2y - 2)$
3. $(2x^3 - 4x^2 + 6) - (4x^3 - 2x^2 - 9) + (7x^3 - 2x^3)$
4. $\frac{1}{3}(3w^2 + 12w - 18) + \frac{2}{5}(10w^2 - 5w - 25)$

Multiplying Polynomials – Simplify each expression.

5. $x(x + 3)$
6. $6y^2(y^3 + 2y + 8)$
7. $(x - 3)(x - 6)$
8. $(x - 4)(x + 8)$
9. $(x + 5)(x - 2)$
10. $(2x - 6)(x + 7)$
11. $(z + 6)(z + 9)$
12. $(3d - 2)(7d + 6)$
13. $\left(\frac{1}{2}y + 6\right)(10y - 8)$
14. $(b - 7)^2$
15. $(x - 6)^2$

Exponent Properties – Simplify each expression.

16. $b^3 \cdot b^9$

17. y^6xy^3

18. $(-6)^{-2}$

19. 6^{-3}

20. $\frac{b^3b^6}{b^9}$

21. $2b^3b^4$

22. $(8x^4y^3)^2$

23. $4x^0y^2$

24. $\frac{12x^2y^3}{4xy}$

25. $(x^4)(x^{-9})$

26. $(-4b^{-3}a^6c^{-12})^0$

27. $5x^0$

28. $\frac{x^{-3}}{x^{-2}}$

29. $\frac{x^{-1}}{6^2}$

30. $\frac{y^3}{y^{-2}}$

31. $(3x^3y)(2xy^4)^5$

32. $\left(\frac{4x^3}{y^4}\right)^{-2}$