

Name:

Date:

Period:

Simplify each expression. Please show all your work on a separate piece of paper.

1. $5m^3 \cdot 6m^5$	2. $(c^5)(-1c^4)(8c^2)$	3. $(3xy^2)(8xy^4)$
4. $(-n^7)(-5n^8)$	5. $(-10xy^2z^6)(3xz^4)$	6. $(-5u^3v^3)(8uv^2)$
7. $(-3j^3k)(-5j^2k^2)$	8. $a^2 \cdot c^5 \cdot c^3 \cdot a^4$	9. $(3a^2b^4)^2$
10. $(xy^2)^5$	11. $(-2r^3s^5)^3$	12. $(7m^5)^2$

Simplify using only positive exponents.

13. $5s^{-4}t^2$	14. $2xy^{-3}$	15. $(-x)^{-2}$
16. $-x^{-2}$	17. $-3a^{-2}b^4$	18. $4x^{-5}y^{-7}$

Simplify each expression.

19. $\frac{x^5y^3}{x^2y^8}$	20. $\frac{24a^2b^3}{-6a^9b^6}$	21. $\frac{m^7n}{m^9n}$
22. $\frac{4c^5d^6}{16c^4d^{10}}$	23. $\frac{56xy^5}{8x^3y^9}$	24. $\frac{r^5s^5t^5}{rs^2t^{12}}$

Use Double Distributive, then simplify.

25. $(x + 2)(x + 5)$	26. $(x + 7)(x - 9)$	27. $(2x + 8)(x + 4)$
28. $(x - 6)(x + 3)$	29. $(x - 3)^2$	30. $(3x + 1)^2$

Add/Subtract the Polynomials. Write your answer in standard form.

31. $(2x^2 - 4x + 3) + (11x^2 + 6x - 1)$	32. $(4x - 3y) + (x + y)$
33. $(-5y^2 + 6y - 9) - (10y^2 - 9y + 7)$	34. $(2y^2 + 15y - 6) - (4y^2 - 7y + 7)$
35. $(9z^2 - 4z + 13) + (11z - 6)$	36. $(m^2 - 2m) - (5m^2 - 9m - 2)$
37. $(8x^2 - 5x - 2) - (-5x^2 - 4x + 1)$	38. $(3a + 5ab - 9b) + (-5a - 3ab)$