

Name: _____ Period: _____ Date: _____

Multiply the Monomials.**Example:** $3x^2y^3 \cdot 4xy^2 = 12x^3y^5$.

1. $3x^2 \cdot (-2xy)$ _____ 5. $5x^2 \cdot (4x)$ _____

2. $(-st^2)(st)$ _____ 6. $(-9x^2)(-3y^2)$ _____

3. $9xyz \cdot (9x^2y^3z)$ _____ 7. $(8a^3b^2c)(-2ac)(3bc^2)$ _____

4. $(3xy) \cdot \frac{1}{3}xyz$ _____ 8. $(xy)(-xy)(yz^2)$ _____

Multiply the Polynomials.**Example:** $(x+1)(x^2 - 2x + 3) = x^3 - x^2 + x + 3$ (Distributive Property or "multiply like numbers").

9. $2x^3(x+3)$ _____ 13. $(x+1)(x-1)$ _____

10. $-s^2t^2(s+1)$ _____ 14. $(-t+3)(-t-3)$ _____

11. $(x-7)(x+1)$ _____ 15. $x^2(x+y)$ _____

12. $x(3x-3)$ _____ 16. $(x+3)^2$ _____

Multiply or Divide the Polynomials. Write answers in Standard Form.

17. $(x^2 + 2x + 3) \cdot (x - 4)$ _____

18. $(x^2 - 4x + 3) \div (x - 1)$

19. $(x^3 - 2x^2 - 3x + 6) \div (x - 2)$

20. $x - 2 \overline{)x^2 - 4x + 4}$

21. $(x^2 + 1)(x^2 - 1)$

22. $(y^3 - y^2 + y) \cdot (2y^2 + 3y)$
