



Name: _____ Period: _____

SM2 4.2 Adding and Subtracting Polynomials

1. What is a polynomial?

Decide whether each expression is a polynomial. If it is, state the degree of the polynomial. If it is not, explain why not.

2. $5x^3 + 2x^{1/2} + 6$

3. $-\frac{4}{3}a^5 - \frac{a^2}{2}$

4. $\frac{12m^8}{m^2 - 2m + 1}$

5. $6c^{-2} + c - 1$

6. $7.34n - 2$

7. 57

Simplify.

8. $(3n^2 + 1) + (8n^2 - 8)$

9. $(6w - 11w^2) - (4 + 7w^2)$

10. $(6n^2 + 5n) - (n^2 - 2n)$

11. $(3r - 8r^2) + (4r^2 + 6r)$

$$12. (2t^2 - 5t) + (2 + 5t + 3t^2)$$

$$13. (8u^3 + 5u) - (4u + 8u^2 - 5u^3)$$

$$14. (5x^3 + 7x^2) - (-4 + 6x^3) + (-3 - 5x^3)$$

$$15. (m^3 + 5m^2) - (3m^3 + m^2) + (-m^2 + 2m^3)$$

$$16. (2p^2 - 6p) - (3p + 7) - (4p^2 + 5)$$

$$17. (6k^3 - 4k) - (-5k - 2k^2) - (6 - 5k^3)$$

$$18. (2q - 5 + q^3) + (3q^3 + 3 - 2q^2)$$

$$19. (7 - 5y^2 - 6y^3) - (7y^3 - 5y^2 - 5)$$

$$20. (t^2 + 2t^4 - t) - (5t^2 - 5t + 8t^3)$$

$$21. (5m^2 - 2mp - 6p^2) + (-3m^2 + 5mp + p^2)$$