

Name : \_\_\_\_\_ Score : \_\_\_\_\_

Teacher : \_\_\_\_\_ Date : \_\_\_\_\_

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## Adding and Subtracting Polynomials

**Simplify each expression.**

1)  $(4 - 9b^4 - 2b^2) - (7b^2 + 8b^3 + 3) + (b^4 - 5b^3 + 6)$

6)  $(k^3 + 9k^4 - 2) + (5k^3 - 7 + 4k^4) - (8k^3 + 6k + 3)$

2)  $(9g^4 + 6g^2 - 7g) - (8g^2 + 3g) - (2 + 4g^3 - 5g^4)$

7)  $(5z - 8z^4) - (7z^2 - 4z^4) + (9z + 3z^2 - 2)$

3)  $(6s + 7s^4 - 3) + (9s - 5s^4 - 4s^2)$

8)  $(6 + y^5 - 4y) - (8y^5 + 7 - 9y^4) + (5 - 2y^5 + 3y^4)$

4)  $(4n^5 - 3) - (9n^5 - 6 + 2n^4) - (8n^4 + 7n + 5)$

9)  $(8q^4 - 4) + (6 - 5q^3 + 7q^4)$

5)  $(4 + 3z^3 + 2z^4) - (6z^4 + 7z^2 + 9) + (8z^3 - 5z^2)$

10)  $(4 - 5b^2 + 3b^4) - (6b - 2b^4 + 9)$

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Simplify each expression.

$$1) (4 - 9b^4 - 2b^2) - (7b^2 + 8b^3 + 3) + (b^4 - 5b^3 + 6) \\ - 8b^4 - 13b^3 - 9b^2 + 7$$

$$6) (k^3 + 9k^4 - 2) + (5k^3 - 7 + 4k^4) - (8k^3 + 6k + 3) \\ 13k^4 - 2k^3 - 6k - 12$$

$$2) (9g^4 + 6g^2 - 7g) - (8g^2 + 3g) - (2 + 4g^3 - 5g^4) \\ 14g^4 - 4g^3 - 2g^2 - 10g - 2$$

$$7) (5z - 8z^4) - (7z^2 - 4z^4) + (9z + 3z^2 - 2) \\ - 4z^4 - 4z^2 + 14z - 2$$

$$3) (6s + 7s^4 - 3) + (9s - 5s^4 - 4s^2) \\ 2s^4 - 4s^2 + 15s - 3$$

$$8) (6 + y^5 - 4y) - (8y^5 + 7 - 9y^4) + (5 - 2y^5 + 3y^4) \\ - 9y^5 + 12y^4 - 4y + 4$$

$$4) (4n^5 - 3) - (9n^5 - 6 + 2n^4) - (8n^4 + 7n + 5) \\ - 5n^5 - 10n^4 - 7n - 2$$

$$9) (8q^4 - 4) + (6 - 5q^3 + 7q^4) \\ 15q^4 - 5q^3 + 2$$

$$5) (4 + 3z^3 + 2z^4) - (6z^4 + 7z^2 + 9) + (8z^3 - 5z^2) \\ - 4z^4 + 11z^3 - 12z^2 - 5$$

$$10) (4 - 5b^2 + 3b^4) - (6b - 2b^4 + 9) \\ 5b^4 - 5b^2 - 6b - 5$$