

## Polynomial Review

Date \_\_\_\_\_ Period \_\_\_\_\_

Simplify each expression. Then classify your answer.

1)  $(4x + 4 + 5x^3) + (6 + 4x + 2x^3)$

2)  $(7x^3 - 8 - 5x^2) - (4 - 6x - x^3)$

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

4)  $(5 - 2v^3 - 8v^4) + (v^4 - 7v^3 - 1)$

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Simplify each expression. Then classify your answer.

1)  $(4x + 4 + 5x^3) + (6 + 4x + 2x^3)$

$$7x^3 + 8x + 10$$

Cubic Trinomial

2)  $(7x^3 - 8 - 5x^2) - (4 - 6x - x^3)$

$$7x^3 - 8 - 5x^2 - 4 + 6x + x^3$$

$$8x^3 - 5x^2 + 6x - 12$$

cubic polynomial

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

$$3n + 8n^4 + 8 - 5n - 2n^4 - 7n^2$$

$$6n^4 - 7n^2 - 2n + 8$$

Quartic polynomial

4)  $(5 - 2v^3 - 8v^4) + (v^4 - 7v^3 - 1)$

$$-7v^4 - 9v^3 + 4$$

Quartic Trinomial

Find each product. Then classify your answer.

5)  $(3x - 4)(7x + 1)$

$$21x^2 + 3x - 28x - 4$$

$$21x^2 - 25x - 4$$

Quadratic Trinomial

6)  $(4p - 7)(5p - 5)$

$$20p^2 - 20p - 35p + 35$$

$$20p^2 - 55p + 35$$

Quadratic Trinomial

7)  $(5p^2 - 3p + 1)(4p + 4)$

$$20p^3 - 12p^2 + 4p + 20p^2 - 12p + 4$$

$$20p^3 + 8p^2 - 8p + 4$$

Cubic Polynomial

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

$$35n^3 + 35n^2 - 42n - 35n^2 - 35n + 42$$

$$35n^3 - 77n + 42$$

Cubic Trinomial

Find each product. Then classify your answer.

5)  $(3x - 4)(7x + 1)$

6)  $(4p - 7)(5p - 5)$

7)  $(5p^2 - 3p + 1)(4p + 4)$

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