Secondary II-Unit 2.1 Quad Prep Day 4 Homework Name_____

Polynomial Basics

Date_____ Period____

With each polynomial identify the following information.

1) $4x^4 - 7x^3 - 1$

Number of Terms:

Type: Degree:

Coefficient(s): Constant:

2) $-3k^5$

Number of Terms:

Type: Degree:

Coefficient(s): Constant:

3) $7n - 7$

Number of Terms:

Type: Degree:

Coefficient(s): Constant:

4) $-7x^5 - 2x^4 + 4x^2 + 5$

Number of Terms:

Type: Degree:

Coefficient(s): Constant:

5) $5 + 12x^2$

Number of Terms:

Type: Degree:

Coefficient(s): Constant:

6) -9

Number of Terms:

Type: Degree:

Coefficient(s): Constant:

Add or subtract the polynomials.

7) $(r^2 - r^4) - (6r^4 + 2r^2)$

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

9) $-8(x - 10) + 2$

10) $10(1 - 3n) - 3n$

11) $6(-7 - 6p) + 6(-4p + 10)$

12) $-6(k - 5) + 10(k + 1)$

13) $(2a^4 - 5a^3 + 2a^2) + (5a^3 + 6a^2)$

14) $(6k^4 - 3k^3 + 1) - (5k^4 + 3)$

15) $(x^2 - 2x^4) - (7x^2 - 7x - 6x^4)$

16) $(4v^4 - 7v) - (8 + 5v + 5v^4)$

Factor out the GCF of each expression.

17) $27m^2 - 36m + 45$

18) $28 + 16x + 28x^3$

19) $4p^3 + 4p^2$

20) $-x^3 + x^2$

21) $8n^5 + n^2 + 8n$

22) $9b^{14} + 36b^{12} + 54b^{10}$

23) $40r^7 - 15r^5 + 35r^3$

24) $6x^3 + 6x^5 + 12x^4$

Find each product.

25) $8x(4x + 5)$

26) $9(-2 - 10x)$

27) $5(-5 - 10k)$

28) $(2r - 5)(2r + 5)$

29) $(n + 5)^2$

30) $(8n + 4)(7n + 6)$

31) $(8a + 2)(5a - 7)$

32) $(r - 3)(7r - 8)$

33) $(5n - 1)(8n - 3)$

34) $(3m - 5)(5m + 2)$

35) $(p - 5)^2$

36) $(6 - 5k)(6 + 5k)$