Algebra 2

Name _____

<u>BONUS</u>: Lessons 3.1 – 3.3

Block _____ Date _____

** Each correct answer will receive $\frac{1}{2}$ point (10 points total for the whole worksheet). <u>ALL WORK</u> <u>MUST BE SHOWN FOR CREDIT</u> ** work can be done on a separate sheet of paper if more room is needed.

Add or subtract each expressions.

1) $(7x^2 + 3x^3 – 2) + (5x^2 + 5x^4 + x^3) + (1 + 8x^2 – 8x^3)$

2) $(8 – 5a – 6a^2) – (5a^2 + 7a^4 – 5) + (6a + a^4 + 5)$

3) $(8n – 3 + 5n^2) – (4n^4 – 4n^2 + 6n) – (n^4 + n – 3n^2)$

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

5) $(3n – 6n^3 + 2n^2 – 3n^4) + (n^2 + 5n + 4n^3 + 2) + (4n^4 + 7 + n^2 + 5n)$

6) $(2x^2 – 3 + 4x^4 – 2x) + (6 – 3x^2 + 3x^4 – 7x) + (7x^2 – 5x -1 – 8x^4)$

Multiply each polynomial.

7) $(7v + 8)(4v^2 + v + 7)$

8) $(6x + 1)(2x^2 + 7x – 4)$

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

10) $(3p^2 - 8p + 7)(5p^2 + 6p - 7)$

11) $(3x^2 - 7x - 8)(2x^2 - 7x + 6)$

12) $(6a^2 + 7a - 1)(4a^2 + 7a + 7)$

13) $(5x - 2y)(x^2 + 7xy - 3y^2)$

14) $(7u + 3v)(8u^2 - 3uv - 4v^2)$

Divide each polynomial.

15) $(n^5 - 13n^4 + 30n^3 + 9n - 96) \div (n - 10)$

16) $(b^3 - 3b^2 - 7b + 2) (b + 2)$

17) $(8v^3 + 53v^2 + 30v) \div (v + 6)$

18) $(x^5 - 8x^4 + 4x^3 + 19x^2 + 19x - 43) \div (x - 7)$

19) $(8r^5 + 31r^4 + 20r^3 - 10r^2 - 15r + 8) \div (r + 3)$

20) $(m^5 - 12m^4 + 28m^3 + 58m^2 - 56m - 40) \div (m - 7)$