3.3 Common Factors of Polynomials (part 1)

*A [ ] is the addition or subtraction of [ ] (called monomials)

*Each term consists of a number ([ ]) and variables that have either [ ] exponents.

ex.

*Terms are held together by [ ] and separated by [ ]

*The [ ] of a term is the sum of the [ ] on the variables.

ex. ex.

*The degree of a polynomial is the degree of the [ ] with the greatest [ ]

ex.

ex.

* To add or subtract polynomials, [ ] together.

ex. ex.

Your turn: a) b)

*To multiply polynomials, multiply each term of the first polynomial by each term in the second polynomial.

ex.

ex.

Your turn: a)

b)

Add the following polynomials (Write answers in descending order):

1. $(7j^3 - 2) + (5j^3 - j - 3)$
2. $(8a^5 - 4) + (3a^5 + a - 2)$
3. $(6m^5 + 1) + (2m^5 + 9m - 1)$
4. $(3m^5 + 1) + (9m^5 + 3m - 2)$
5. $(-5x^2 - x + 4) + (-3x^2 - 5x + 2)$
6. $(-4x + 4x^3 + 7) + (3x^3 - 9 - 3x)$
7. $(3x^2 - 2x + 1) + (-x^2 + 3x + 1)$

Subtract the following polynomials (Write answers in descending order):

8. $(-x^2 + x - 4) - (3x^2 - 8x - 2)$
9. $(8x^2 - 3x) - (5x - 5 - 8x^2)$
10. $(-x^2 - 5x - 3) - (-7x^2 - 8x - 8)$
11. $(-2x^3 + x) - (7x - 3 - 7x^3)$
12. $(3x^3 + 3x^2 + 9) - (5x^3 - 7x^2 + 6x - 9)$
13. $(5x^3 + 5x^2 + 5) - (6x^3 - 6x^2 + 8x - 5)$
14. $(5x^3 + 3x^2 + 5) - (7x^3 - 9x^2 + 8x - 5)$

Multiply the following polynomials:

15. $(8x^3y^2)(-3x^2y^3)$
16. $(-9x^3y)(-8x^2y^3)$
17. $j^2(k^5j^3)$
18. $a^4(b^4a^6)$
19. $2x^3(9x^2 + 5y)$
20. $5x^3(2x + 4y)$
21. $5m^2(3m^3 + 5m^2 - 4m + 6)$
22. $-4x^2y(x^2 + 7xy - 6y^3)$
23. $(x + 6)(x + 2)$
24. $(x - 6)(x + 9)$
25. $(4x - 3)(3x - 5)$
26. $(x - 8)(x - 7)$
27. $(6a + 1)(5a + 2)$
28. $(5x + 4y)(2x + 5y)$
29. $(2x + y)(4x - 9y)$
30. $(6r - 5)(6r + 1)$
31. $(6c + 7)(6c - 7)$
32. $(3x + 5y)^2$
33. $(x - 2)(x^2 - x + 3)$
34. $(2x - 5)(5x^2 + 4x + 7)$

Homefun: Pg. #(1-34)even & 149 #(1-10)ace