Name:_____ Date:_____

REVIEW DITTO FOR UNIT TEST #7 ON FACTORING

i. Vocabulary:

1. Numbers that divide other numbers exactly are called	2. The answer to a multiplication problem is called the
3. The largest term that exactly divides given terms is called the	4. The product of two equal factors is called a (n)
5. A number that has more than 2 factors is called a (n)	6. A method used to multiply two binomials
7. A polynomial of 3 terms is called	8. The standard form of a trinomial

ii. Find the second factor of $36a^3b^2c$ if the first factor is:

9. $4a^2b$	10. $-12a^3c$
11. $6abc$	12. $-9abc$

Identify the steps for factoring using the G.C.F Method:

1.) Determine the GCF

2.) Divide each term by the g.c.f

3.) Put gcf on the outside and the quotient on inside

4.) check by distributing

iii. Write the following using the G.C.F method:

13. $7-35d$	14. $27a^2bc+18ab^2c$
15. $s^2r+s^3-s^4v$	16. $10r-10s$
17. $4x+x^2$	18. $3x^2+6x+15$
19. $ax+3x$	20. $xp+xq$
21. $7y-7$	22. $\Pi r^2-\Pi r$

Identify the steps for factoring using the D.O.T.S Method:

1.) 2 set of parentheses (+)(-)

2.) Take the square root of each perfect square

3.) check by double distributing or box method.

23. $x^2 - 196$	24. $100 - d^2$
25. $4x^2 - 64y^6$	26. $\frac{25}{144} - 16y^4$
27. $x^{10} - .144$	28. $.81 - y^8$
29. Factored, the expression $16x^2 - 25y^2$ is equivalent to 1) $(4x - 5y)(4x + 5y)$ 2) $(4x - 5y)(4x - 5y)$ 3) $(8x - 5y)(8x + 5y)$ 4) $(8x - 5y)(8x - 5y)$	30. If Ann correctly factors an expression that is the difference of two perfect squares, her factors could be 1) $(2x + y)(x - 2y)$ 2) $(2x + 3y)(2x - 3y)$ 3) $(x - 4)(x - 4)$ 4) $(2y - 5)(y - 5)$

V . Write the product of the following:

31. $(y-5)(y+5)$	32. $(x+4)(x+3)$
33. $(x-3)(x+2)$	34. $(2x-3)(x+1)$

TRINOMIALS WITH THE LEADING COEFFICENT OF ONE

35. $x^2+8x+15$	36. $x^2+13x+40$
37. $x^2-10x+24$	38. $x^2-15x+36$
39. $x^2+3x-28$	40. x^2-x-6

41. What are the factors of $x^2 - 10x - 24$?

1) $(x-4)(x+6)$
2) $(x-4)(x-6)$
3) $(x-12)(x+2)$
4) $(x+12)(x-2)$

42. What are the factors of $x^2 - 5x + 6$?

1) $(x+2)$ and $(x+3)$
2) $(x-2)$ and $(x-3)$
3) $(x+6)$ and $(x-1)$
4) $(x-6)$ and $(x+1)$

43. What are the factors of the expression $x^2 + x - 20$?

1) $(x+5)$ and $(x+4)$
2) $(x+5)$ and $(x-4)$
3) $(x-5)$ and $(x+4)$
4) $(x-5)$ and $(x-4)$

44. What is a common factor of $x^2 - 9$ and $x^2 - 5x + 6$?

1) $x+3$
2) $x-3$
3) $x-2$
4) x^2

TRINOMIALS WITH THE LEADING COEFFICENT OF MORE THAN ONE

45. $6x^2 + 11x - 10$

46. $2x^2 - x - 3$

47. $4x^2 - 21x - 25$	48. $3x^2 - 4x - 4$

WHEN FACTORING YOU **ALWAYS** LOOK FOR _____

49. $2x^2 - 72y^2$	50. $2x^2 - 8x - 10$
51. $5x^2 - 20$	52. $3x^3 - 75x$

53. $6x^2 - 6x^4$

54. $x - 25x^3$

55. $5x^2 + 15x + 10$

56. $ax^2 - 18ax + 77a$

57. Factored completely, the expression $2y^2 + 12y - 54$ is equivalent to

1) $2(y + 9)(y - 3)$

2) $2(y - 3)(y - 9)$

3) $(y + 6)(2y - 9)$

4) $(2y + 6)(y - 9)$

58. Factored completely, the expression $2x^2 + 10x - 12$ is equivalent to

1) $2(x - 6)(x + 1)$

2) $2(x + 6)(x - 1)$

3) $2(x + 2)(x + 3)$

4) $2(x - 2)(x - 3)$

59. Which expression represents $36x^2 - 100y^6$ factored completely?

1) $2(9x + 25y^3)(9x - 25y^3)$

2) $4(3x + 5y^3)(3x - 5y^3)$

3) $(6x + 10y^3)(6x - 10y^3)$

4) $(18x + 50y^3)(18x - 50y^3)$

60. Written in simplest factored form, the binomial $2x^2 - 50$ can be expressed as

1) $2(x - 5)(x - 5)$

2) $2(x - 5)(x + 5)$

3) $(x - 5)(x + 5)$

4) $2x(x - 50)$