Name:_____ Date:_____

REVIEW DITTO FOR UNIT TEST #8 ON FACTORING

Factor the following using the G.C.F method:

1. $7 - 35d$	2. $27a^2bc + 18ab^2c$
3. $s^2r + s^3 - s^4v$	4. $10r - 10s$
5. $4x + x^2$	6. $3x^2 + 6x + 15$
7. $ax + 3x$	8. $xp + xq$
9. $7y - 7$	10. $\pi r^2 - \pi r$

Factor using the D.O.T.S Method:

11. $x^2 - 196$	12. $100 - d^2$
13. $4x^2 - 64y^6$	14. $\frac{25}{144} - 16y^4$

15. 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) $(8x - 5y)(8x - 5y)$

16. 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) $(2y - 5)(y - 5)$

Write the product of the following:

17. $(y - 5)(y + 5)$	18. $(x + 4)(x + 3)$
19. $(x + 3)^2$	20. $(2x - 3)(x + 1)$

Factor the following trinomials.

21. $x^2 + 8x + 15$	22. $x^2 + 13x + 40$
23. $x^2 - 10x + 24$	24. $x^2 - 15x + 36$
25. $x^2 + 3x - 28$	26. $x^2 - x - 6$

27. 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) $(x+12)(x-2)$	28. 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 $(x+1)$

29. What are the factors of the expression $x^2 + x - 20$?	30. What is a common factor of $x^2 - 9$ and $x^2 - 5x + 6$?
1) $(x+5)$ and $(x+4)$ 2) $(x+5)$ and $(x-4)$ 3) $(x-5)$ and $(x+4)$ 4) $(x-5)$ and $(x-4)$	1) $x+3$ 2) $x-3$ 3) $x-2$ 4) x^2

Factor the following trinomials that have a leading coefficient greater than 1.

31. $2x^2 + 11x + 12$	32. $2x^2 - x - 3$

WHEN FACTORING YOU **ALWAYS** LOOK FOR _____

33. $2x^2 - 72y^2$	34. $2x^2 - 8x - 10$

35. $6x^2 - 6x^4$

36. $x - 25x^3$

37. $5x^2 + 15x + 10$

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

39. 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) $(2y + 6)(y - 9)$

40. 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) $2(x - 2)(x - 3)$

41. 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) $(18x + 50y^3)(18x - 50y^3)$

42. 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) $2x(x - 50)$