

Difference of Squares

$$1. x^2 - 4 \\ (x+2)(x-2)$$

$$2. x^2 - 9 \\ (x+3)(x-3)$$

$$3. x^2 - 16 \\ (x+4)(x-4)$$

$$4. x^2 - 25 \\ (x+5)(x-5)$$

$$5. x^2 - 36 \\ (x+6)(x-6)$$

$$6. x^2 - 49 \\ (x+7)(x-7)$$

$$7. x^2 - 64 \\ (x+8)(x-8)$$

$$8. x^2 - 81 \\ (x+9)(x-9)$$

$$9. x^2 - 100 \\ (x+10)(x-10)$$

$$10. x^2 - 121 \\ (x+11)(x-11)$$

$$11. x^2 - 144 \\ (x+12)(x-12)$$

$$12. x^2 - 169 \\ (x+13)(x-13)$$

$$13. x^2 - 196 \\ (x+14)(x-14)$$

$$14. x^2 - 225 \\ (x+15)(x-15)$$

$$15. x^2 - y^2 \\ (x+y)(x-y)$$

$$16. a^2 - b^2$$

$$17. a^4 - b^2$$

$$18. 144 - y^2 \\ -1(y^2 - 144) = -1(y+12)(y-12) \\ \text{or } (12+y)(12-y)$$

$$(a+b)(a-b)$$

$$(a^2 + b)(a^2 - b)$$

$$19. 81 - a^2 \\ -1(a^2 - 81) = -1(a+9)(a-9) \text{ or } \\ (9+a)(9-a)$$

$$20. 9x^2 - 4 \\ (3x+2)(3x-2)$$

$$21. 16y^2 - 25 \\ (4y+5)(4y-5)$$

$$22. 36y^2 - 121x^2 \\ (6y+11x)(6y-11x)$$

$$23. 20x^2 - 45 \\ 5(4x^2 - 9) = 5(2x+3)(2x-3)$$

$$24. 18x^2 - 98 \\ 2(9x^2 - 49) = 2(3x+7)(3x-7)$$

$$25. 27y^2 - 48 \\ 3(9y^2 - 16) = 3(3y+4)(3y-4)$$

$$26. 28 - 7z^2 \\ -7(z^2 - 4) = -7(z+2)(z-2)$$

$$27. (a+b)^2 - 4 \\ [(a+b)+2][(a+b)-2]$$

$$28. (a+b)^2 - (x-y)^2 \\ [(a+b)+(x-y)][(a+b)-(x-y)]$$

$$29. (2x-3)^2 - 81 \\ [(2x-3)+9][(2x-3)-9]$$

$$30. Z^8 - 1 \\ (z^4+1)(z^4-1) = \\ (z^4+1)(z^2+1)(z^2-1) \\ (z^4+1)(z^2+1)(z+1)(z-1)$$