

DIRECTIONS: Find the product.

1. $(x + 8)(x - 8)$
 $x^2 - 64$

2. $(4m - 7)(4m + 7)$
 $16m^2 - 49$

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

4. $(v^2 - 11)(v^2 + 11)$
 $v^4 - 121$

5. $(n^3 + 5p^2)(n^3 - 5p^2)$
 $n^6 - 25p^4$

6. $(w + 10)^2$
 $w^2 + 20w + 100$

7. $(y - 6)^2$
 $y^2 - 12y + 36$

8. $(2t + 9)^2$
 $4t^2 + 36t + 81$

9. $(12w - 5)^2$
 $144w^2 - 120w + 25$

10. $(4x + 7y)^2$
 $16x^2 + 56xy + 49y^2$

11. $(3m - 14n)^2$
 $9m^2 - 84mn + 196n^2$

12. $(c^2 - 1)^2$
 $c^4 - 2c^2 + 1$

13. $(2b^3 + 5p^2)^2$
 $4b^6 + 20b^3p^2 + 25p^4$

14. $(r + 2)^3$
 $r^3 + 6r^2 + 12r + 8$

15. $(z - 8)^3$
 $z^3 - 24z^2 + 192z - 512$

16. $(3w + 4)^3$
 $27w^3 + 108w^2 + 144w + 64$

17. $(2x - 5)^3$
 $8x^3 - 60x^2 + 150x - 125$

18. $(10a + 7b)^3$
 $1000a^3 + 2100a^2b + 1470ab^2 + 343b^3$

19. $(9m - 2n)^3$
 $729m^3 - 486m^2n + 108mn^2 - 8n^3$

20. $(v^2 + 6w)^3$
 $v^6 + 18v^4w + 108v^2w^2 + 216w^3$

Sum & Difference

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

Example 1 $(x + 20)(x - 20) =$ _____

Example 2 $(10x - 9y)(10x + 9y) =$ _____

Binomial Square

$$(a + b)^2 = a^2 + 2ab + b^2$$

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

Example 3 $(4x + 13)^2 =$ _____

Example 4 $(6x - 4y)^2 =$ _____

Binomial Cube

$$(a + b)^3 = a^3 + 3a^2b + 3ab^2 + b^3$$

$$(a - b)^3 = a^3 - 3a^2b + 3ab^2 - b^3$$

Example 5 $(x + 4)^3 =$ _____

Example 6 $(3y - 8)^3 =$ _____

Example 7 $(5z + 2k)^3 =$ _____