

Factoring
Difference of Squares

Answers

Factoring Difference of Squares

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

Note: Sum of Squares does not factor

$$a^2 + b^2 \text{ does not factor}$$

Name: _____

Use the difference of squares formula to factor the following. Don't forget to factor out the GCF if necessary.

1. $x^2 - 9$ $= (x + 3)(x - 3)$	2. $y^2 - 25$ $= (y + 5)(y - 5)$	3. $x^2 + 1$ does not factor
4. $16 - t^2$ $= (4 + t)(4 - t)$	5. $4x^2 - 1$ $= (2x + 1)(2x - 1)$	6. $16 - 9x^2$ $= (4 + 3x)(4 - 3x)$
7. $36t^2 - s^2$ $= (6t + s)(6t - s)$	8. $4p^2 - 9q^2$ $= (2p + 3q)(2p - 3q)$	9. $x^3 - 64x$ $= x(x + 8)(x - 8)$
10. $2t^4 - 18t^2$ $= 2t^2(t + 3)(t - 3)$	11. $4x^2y^4 - 49$ $= (2xy^2 + 7)(2xy^2 - 7)$	12. $x^4 - 81$ $= (x^2 + 9)(x + 3)(x - 3)$