

# Factoring a Difference of Two Squares (DOTS)

1) Two Terms

2) Each Term MUST be a perfect square

# - on the list

Variable - even exponent

Ex:  $x^2 - 4$

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

$$4y^2 - 16x^2$$

$$(2y+4x)(2y-4x)$$

$$x^2 - 36$$

$$(x+6)(x-6)$$

$$b^2 - 16$$

$$(b + 4)(b - 4)$$

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$$b^{10} - 25$$

$$(b^5 + 5)(b^5 - 5)$$

$$2x^3 - 32x$$

$$2x(x^2 - 16)$$

$$2x(x+4)(x-4)$$

$$3x^4 - 75x^2$$

$$3x^2(x^2 - 25)$$

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

$$x^8 - 16$$

$$(x^4 + 4)(x^4 - 4)$$

$$(x^4 + 4)(x^2 + 2)(x^2 - 2)$$

$$16a^4 - c^2$$

~~$$4a^2$$~~

$$(4a^2 + c)(4a^2 - c)$$

$$\textcircled{10} (28v^3 + 16v^2) - (21v - 12)$$

$$(28v^3 + 16v^2) + (-21v - 12)$$

$$4v^2(7v + 4) + -3(7v + 4)$$

$$\boxed{(4v^2 - 3)(7v + 4)}$$

$$\textcircled{15} (56xw + 49xk^2) + (-24yw - 21yk^2)$$

$$7x(8w + 7k^2) + -3y(8w + 7k^2)$$

$$\boxed{(7x - 3y)(8w + 7k^2)}$$