



Algebra, Factoring, Binomial

Name _____

Date _____

Factor these binomials by the difference of squares formula

(1) $25u^{16} - 81g^{14}$

(2) $25f^{10} - 81k^{12}$

(3) $256t^{14} - x^4$

(4) $16k^{20} - 625h^{20}$

(5) $9c^{14} - 4r^{18}$

(6) $64f^{10} - 15625s^{16}$

(7) $64w^{18} - e^8$

(8) $15625w^{16} - 4096p^{18}$

(9) $9z^{20} - 4u^{14}$

(10) $m^6 - 64x^{12}$

(11) $25e^{18} - h^{10}$

(12) $81p^2 - 4096u^{18}$



Answers

Factor these binomials by the difference of squares formula

$$(1) \quad 25u^{16} - 81g^{14}$$

$$(5u^8 - 9g^7)(5u^8 + 9g^7)$$

$$(3) \quad 256t^{14} - x^4$$

$$(16t^7 - x^2)(16t^7 + x^2)$$

$$(5) \quad 9c^{14} - 4r^{18}$$

$$(3c^7 - 2r^9)(3c^7 + 2r^9)$$

$$(7) \quad 64w^{18} - e^8$$

$$(8w^9 - e^4)(8w^9 + e^4)$$

$$(9) \quad 9z^{20} - 4u^{14}$$

$$(3z^{10} - 2u^7)(3z^{10} + 2u^7)$$

$$(11) \quad 25e^{18} - h^{10}$$

$$(5e^9 - h^5)(5e^9 + h^5)$$

$$(2) \quad 25f^{10} - 81k^{12}$$

$$(5f^5 - 9k^6)(5f^5 + 9k^6)$$

$$(4) \quad 16k^{20} - 625h^{20}$$

$$(4k^{10} - 25h^{10})(4k^{10} + 25h^{10})$$

$$(6) \quad 64f^{10} - 15625s^{16}$$

$$(8f^5 - 125s^8)(8f^5 + 125s^8)$$

$$(8) \quad 15625w^{16} - 4096p^{18}$$

$$(125w^8 - 64p^9)(125w^8 + 64p^9)$$

$$(10) \quad m^6 - 64x^{12}$$

$$(m^3 - 8x^6)(m^3 + 8x^6)$$

$$(12) \quad 81p^2 - 4096u^{18}$$

$$(9p - 64u^9)(9p + 64u^9)$$