



Algebra, Factoring, Trinomial

Name _____

Date _____

Factor these perfect square trinomials

(1) $36u^{20} - 156u^{10} + 169$

(2) $169u^4 + 208u^2h + 64h^2$

(3) $25q^8 + 110q^4c^9 + 121c^{18}$

(4) $169d^{16} - 390d^8x^3 + 225x^6$

(5) $121w^{20} + 88w^{10} + 16$

(6) $169x^{18} + 260x^9b^9 + 100b^{18}$

(7) $d^{14} + 4d^7c^3 + 4c^6$

(8) $196u^6 + 140u^3p^9 + 25p^{18}$

(9) $36u^2 + 60ua + 25a^2$

(10) $169b^{10} - 26b^5u^{10} + u^{20}$

(11) $25u^{18} - 140u^9m^2 + 196m^4$

(12) $81p^{16} - 144p^8k^4 + 64k^8$



Answers

Factor these perfect square trinomials

$$(1) \quad 36u^{20} - 156u^{10} + 169$$

$$(6u^{10} - 13)^2$$

$$(2) \quad 169u^4 + 208u^2h + 64h^2$$

$$(13u^2 + 8h)^2$$

$$(3) \quad 25q^8 + 110q^4c^9 + 121c^{18}$$

$$(5q^4 + 11c^9)^2$$

$$(4) \quad 169d^{16} - 390d^8x^3 + 225x^6$$

$$(13d^8 - 15x^3)^2$$

$$(5) \quad 121w^{20} + 88w^{10} + 16$$

$$(11w^{10} + 4)^2$$

$$(6) \quad 169x^{18} + 260x^9b^9 + 100b^{18}$$

$$(13x^9 + 10b^9)^2$$

$$(7) \quad d^{14} + 4d^7c^3 + 4c^6$$

$$(d^7 + 2c^3)^2$$

$$(8) \quad 196u^6 + 140u^3p^9 + 25p^{18}$$

$$(14u^3 + 5p^9)^2$$

$$(9) \quad 36u^2 + 60ua + 25a^2$$

$$(6u + 5a)^2$$

$$(10) \quad 169b^{10} - 26b^5u^{10} + u^{20}$$

$$(13b^5 - u^{10})^2$$

$$(11) \quad 25u^{18} - 140u^9m^2 + 196m^4$$

$$(5u^9 - 14m^2)^2$$

$$(12) \quad 81p^{16} - 144p^8k^4 + 64k^8$$

$$(9p^8 - 8k^4)^2$$