

Algebra 3 Assignment # 10

Factor the Following:

(1) $4x^2 - 49y^4$

(9) $16x^6 - 32x^5 - 48x^4$

(2) $x^3 - 8$

(10) $32x^2 - 11x - 21$

(3) $27x^3 + 8y^6z^3$

(11) $6x^2 - 13x - 5$

(4) $x^2 - x - 20$

(12) $12x^2 + 7x - 10$

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

(13) $48x^2 + 26x - 22$

(6) $9x^2 - 42x + 49$

(14) $25x^2 + 9$

(7) $3x^3 + 30x^2 + 75x$

(15) $4x^6 - 4x^2$

(8) $x^2 + 14x + 45$

(16) $x^6 + 7x^3 - 8$

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Answers

$$(1) (2x + 7y^2)(2x - 7y^2)$$

$$(9) 16x^4(x + 1)(x - 3)$$

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

$$(10) (32x + 21)(x - 1)$$

$$(3) (3x + 2y^2z)(9x^2 - 6xy^2z + 4y^4z^2)$$

$$(11) (3x + 1)(2x - 5)$$

$$(4) (x - 5)(x + 4)$$

$$(12) (4x + 5)(3x - 2)$$

$$(5) (2x + 1)(x + 2)$$

$$(13) 2(x + 1)(24x - 11)$$

$$(6) (3x - 7)(3x - 7)$$

$$(14) \text{ Does not factor}$$

$$(7) 3x(x + 5)(x + 5)$$

$$(15) 4x^2(x^2 + 1)(x + 1)(x - 1)$$

$$(8) (x + 9)(x + 5)$$

$$(16) (x + 2)(x^2 - 2x + 4)(x - 1)(x^2 + x + 1)$$