

Algebra 3 Assignment # 8

Factor each of the following completely please.

(1) $x^2 + ax + bx + ab$

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

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

(8) $x^3 + 9x^2 + 27x + 27$

(3) $2x^2 - 3yz - 2xz + 3xy$

(9) $x^5 - x^3 - x^2 + 1$

(4) $7x^2 + 35x - 7xy - 35y$

(10) $9x^5 + 4x^3 - 72x^2 - 32$

(5) $x^2 + 4x + 4 - 9y^2$

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

(6) $x^4 - x^2 + 10x - 25$

(12) $5x(3x + 1)^2(2x + 3) - 2(3x + 1)(2x + 3)^2$

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Answers

(1) $(x + a)(x + b)$

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

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

(8) $(x + 3)^3$

(3) $(2x + 3y)(x - z)$

(9) $(x + 1)(x - 1)^2(x^2 + x + 1)$

(4) $7(x + 5)(x - y)$

(10) $(x - 2)(x^2 + 2x + 4)(9x^2 + 4)$

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

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

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

(12) $(3x + 2)(5x - 3)(3x + 1)(2x + 3)$