因数分解 発展（20問）　版L

なまえ：＿＿＿＿＿＿＿＿＿＿＿＿　　日づけ：＿＿＿＿＿＿

(1) $x^2 - y^2 + 6y - 9 =$

(2) $(x + y)^2 - 6(x + y) - 7 =$

(3) $x^4 - 34x^2 + 225 =$

(4) $12x^2 - 76x + 80 =$

(5) $x^4 - 21x^2 - 100 =$

(6) $4x^2 - 16x - 20 =$

(7) $(x + y)^2 + 10(x + y) + 21 =$

(8) $x^4 - 29x^2 + 100 =$

(9) $x^2 + 4xy + 3y^2 - 2x + 2y - 8 =$

(10) $x^4 - 17x^2 + 16 =$

(11) $30x^2 + 85x + 35 =$

(12) $x^2 + 5xy + 6y^2 - 7x - 19y + 10 =$

(13) $x^2 - y^2 + 2y - 1 =$

(14) $x^2 + xy - 6y^2 - x - 8y - 2 =$

(15) $x^2 + xy - 2y^2 + x - 7y - 6 =$

(16) $(x + y)^2 - 11(x + y) + 28 =$

(17) $(x + y)^2 + 4(x + y) - 21 =$

(18) $15x^2 - 5x - 20 =$

(19) $x^2 - y^2 + 8y - 16 =$

(20) $x^2 - y^2 + 12y - 36 =$

因数分解 発展（20問）　版Lの答え

※ 答えの中に、まだ分解できる因数が残っていないかを確かめてください。

(1) $x^2 - y^2 + 6y - 9$
$= (x - y + 3)(x + y - 3)$

(2) $(x + y)^2 - 6(x + y) - 7$
$= (x + y - 7)(x + y + 1)$

(3) $x^4 - 34x^2 + 225$
$= (x - 5)(x - 3)(x + 3)(x + 5)$

(4) $12x^2 - 76x + 80$
$= 4(x - 5)(3x - 4)$

(5) $x^4 - 21x^2 - 100$
$= (x - 5)(x + 5)(x^2 + 4)$

(6) $4x^2 - 16x - 20$
$= 4(x - 5)(x + 1)$

(7) $(x + y)^2 + 10(x + y) + 21$
$= (x + y + 3)(x + y + 7)$

(8) $x^4 - 29x^2 + 100$
$= (x - 5)(x - 2)(x + 2)(x + 5)$

(9) $x^2 + 4xy + 3y^2 - 2x + 2y - 8$
$= (x + y + 2)(x + 3y - 4)$

(10) $x^4 - 17x^2 + 16$
$= (x - 4)(x - 1)(x + 1)(x + 4)$

(11) $30x^2 + 85x + 35$
$= 5(2x + 1)(3x + 7)$

(12) $x^2 + 5xy + 6y^2 - 7x - 19y + 10$
$= (x + 2y - 5)(x + 3y - 2)$

(13) $x^2 - y^2 + 2y - 1$
$= (x - y + 1)(x + y - 1)$

(14) $x^2 + xy - 6y^2 - x - 8y - 2$
$= (x - 2y - 2)(x + 3y + 1)$

(15) $x^2 + xy - 2y^2 + x - 7y - 6$
$= (x - y - 2)(x + 2y + 3)$

(16) $(x + y)^2 - 11(x + y) + 28$
$= (x + y - 7)(x + y - 4)$

(17) $(x + y)^2 + 4(x + y) - 21$
$= (x + y - 3)(x + y + 7)$

(18) $15x^2 - 5x - 20$
$= 5(x + 1)(3x - 4)$

(19) $x^2 - y^2 + 8y - 16$
$= (x - y + 4)(x + y - 4)$

(20) $x^2 - y^2 + 12y - 36$
$= (x - y + 6)(x + y - 6)$