因数分解 発展（20問）　版K

なまえ：＿＿＿＿＿＿＿＿＿＿＿＿　　日づけ：＿＿＿＿＿＿

(1) $2x^2 + 16x + 30 =$

(2) $6x^2 + 16x - 6 =$

(3) $x^2 - 2xy - 3y^2 + 2x + 10y - 8 =$

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

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

(6) $30x^2 + 25x - 105 =$

(7) $(x + y)^2 - 13(x + y) + 42 =$

(8) $(x + y)^2 - 2(x + y) - 24 =$

(9) $x^4 - 45x^2 + 324 =$

(10) $x^4 - 32x^2 - 144 =$

(11) $x^2 - 5xy + 6y^2 + 5x - 14y + 4 =$

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

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

(14) $x^4 - 37x^2 + 36 =$

(15) $6x^2 + 27x - 15 =$

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

(17) $(x + y)^2 + 9(x + y) + 20 =$

(18) $x^2 + 5xy + 6y^2 + 4x + 11y + 3 =$

(19) $x^2 - y^2 + 10y - 25 =$

(20) $x^2 + 5xy + 6y^2 - 4x - 11y + 3 =$

因数分解 発展（20問）　版K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) $2x^2 + 16x + 30$
$= 2(x + 3)(x + 5)$

(2) $6x^2 + 16x - 6$
$= 2(x + 3)(3x - 1)$

(3) $x^2 - 2xy - 3y^2 + 2x + 10y - 8$
$= (x - 3y + 4)(x + y - 2)$

(4) $(x + y)^2 + 3(x + y) - 4$
$= (x + y - 1)(x + y + 4)$

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

(6) $30x^2 + 25x - 105$
$= 5(2x - 3)(3x + 7)$

(7) $(x + y)^2 - 13(x + y) + 42$
$= (x + y - 7)(x + y - 6)$

(8) $(x + y)^2 - 2(x + y) - 24$
$= (x + y - 6)(x + y + 4)$

(9) $x^4 - 45x^2 + 324$
$= (x - 6)(x - 3)(x + 3)(x + 6)$

(10) $x^4 - 32x^2 - 144$
$= (x - 6)(x + 6)(x^2 + 4)$

(11) $x^2 - 5xy + 6y^2 + 5x - 14y + 4$
$= (x - 3y + 1)(x - 2y + 4)$

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

(13) $x^4 + x^2 - 2$
$= (x - 1)(x + 1)(x^2 + 2)$

(14) $x^4 - 37x^2 + 36$
$= (x - 6)(x - 1)(x + 1)(x + 6)$

(15) $6x^2 + 27x - 15$
$= 3(x + 5)(2x - 1)$

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

(17) $(x + y)^2 + 9(x + y) + 20$
$= (x + y + 4)(x + y + 5)$

(18) $x^2 + 5xy + 6y^2 + 4x + 11y + 3$
$= (x + 2y + 3)(x + 3y + 1)$

(19) $x^2 - y^2 + 10y - 25$
$= (x - y + 5)(x + y - 5)$

(20) $x^2 + 5xy + 6y^2 - 4x - 11y + 3$
$= (x + 2y - 3)(x + 3y - 1)$