Övningsblad i faktorisering

Faktorisera så långt som möjligt/bryt ut största möjliga faktor

$2x^2 + 3x =$ _____

$4x + 8 =$ _____

$3a^4 + 11a^3 =$ _____

$5x^2 + 25 =$ _____

$33x^2 + 3y^2 =$ _____

$7y^2 + 11y^2 =$ _____

$14y^2 + 12 =$ _____

$3x^2 - 9 =$ _____

$5x^2 - 10y^2 =$ _____

$4y^2 - 7y^2 =$ _____

$5y^2 - 15 =$ _____

$2x^2 + 6x =$ _____

$4x^3 + 8x =$ _____

$3a^4b^2 + 11a^3b =$ _____

$35x^2 + 7x^9 =$ _____

$9x^2 + 3x^3 =$ _____

$7xy^2 + 11x^3y^2 =$ _____

$6y^8 + 2y^{11} =$ _____

$12x^2 - 6x^3 =$ _____

$7x^2y - 11x^3y^4 =$ _____

$49y^4 - 7y^6 =$ _____

$6x^9y^8 + 12x^7y^{11} - 4x^5y^9 =$ _____

$11x^4y^9 - 33x^3y^8 - 44x^4y^4 =$ _____

$3x^2y^6 + 13x^9y^4 - 23x^5y^9 =$ _____

$2x^9y^9 - 4x^7y^7 - 6x^5y^5 =$ _____

$2x^2 + 8x^4 =$ _____

$8x + 2 =$ _____

$a^2 + 11a^3 =$ _____

$9x^2 - 3 =$ _____

$10x^2 - 30x^3 =$ _____

$16y^2 - 32y^3 =$ _____

$2xy^2 + 8x^2y^3 =$ _____

$6y^4 - 18y^6 =$ _____

$2x^5y^5 - 4x^7y^7 - 6x^9y^9 =$ _____

$16x^6y^2 - 4x^3y - 8x^4y^5 =$ _____

$x^2 - 1 =$ _____

$9 - x^2 =$ _____

$4a^2 - 36 =$ _____

$9x^2 - 16 =$ _____

$x^2y^2 - 25 =$ _____

$2x^2 - 18 =$ _____

$75 - 3x^2 =$ _____

$x^2 + 4x + 4 =$ _____

$y^2 + 6y + 9 =$ _____

$x^2 + 2xy + y^2 =$ _____

$x^2 + 16x + 64 =$ _____

$4x^2 + 16x + 16 =$ _____

$x^2 - 4x + 4 =$ _____

$y^2 - 6y + 9 =$ _____

$x^2 - 2xy + y^2 =$ _____

$x^2 - 16x + 64 =$ _____

$4x^2 - 16x + 16 =$ _____

Facit

$2x^2 + 3x = x \cdot 2x + x \cdot 3 = x(2x + 3)$

$4x + 8 = 4(x + 2)$

$3a^4 + 11a^3 = a^3(3a + 11)$

$5x^2 + 25 = 5(x^2 + 5)$

$33x^2 + 3y^2 = 3(11x^2 + y^2)$

$7y^2 + 11y^2 = y^2(7 + 11) = 18y^2$

$14y^2 + 12 = 2(7y^2 + 6)$

$3x^2 - 9 = 3(x^2 - 3)$

$5x^2 - 10y^2 = 5(x^2 - 2y^2)$

$4y^2 - 7y^2 = y^2(4 - 7) = -3y^2$

$5y^2 - 15 = 5(y^2 - 3)$

$2x^2 + 6x = 2x(x + 3)$

$4x^3 + 8x = 4x(x^2 + 2)$

$3a^4b^2 + 11a^3b = a^3b(3ab + 11)$

$35x^2 + 7x^9 = 7x^2(5 + x^7)$

$9x^2 + 3x^3 = 3x^2(3 + x)$

$7xy^2 + 11x^3y^2 = xy^2(7 + 11x)$

$6y^8 + 2y^{11} = 2y^8(3 + y^3)$

$12x^2 - 6x^3 = 6x^2(2 - x)$

$7x^2y - 11x^3y^4 = x^2y(7 - 11xy^3)$

$49y^4 - 7y^6 = 7y^4(7 - y^2)$

$6x^9y^8 + 12x^7y^{11} - 4x^5y^9 = 2x^5y^8(3x^4 + 6x^2y^3 - 2y)$

$11x^4y^9 - 33x^3y^8 - 44x^4y^4 = 11x^3y^4(xy^5 - 3y^4 - 4x)$

$3x^2y^6 + 13x^9y^4 - 23x^5y^9 = x^2y^4(3y^2 + 13x^7 - 23x^3y^5)$

$2x^9y^9 - 4x^7y^7 - 6x^5y^5 = 2x^5y^5(x^4y^4 - 2x^2y^2 - 3)$

$2x^2 + 8x^4 = 2x^2(1 + 4x^2)$

$8x + 2 = 2(4x + 1)$

$a^2 + 11a^3 = a^2(1 + 11a)$

$9x^2 - 3 = 3(3x^2 - 1)$

$10x^2 - 30x^3 = 10x^2(1 - 3x)$

$16y^2 - 32y^3 = 16y^2(1 - 2y)$

$2xy^2 + 8x^2y^3 = 2xy^2(1 + 4xy)$

$6y^4 - 18y^6 = 6y^4(1 - 3y^2)$

$2x^5y^5 - 4x^7y^7 - 6x^9y^9 = 2x^5y^5(1 - 2x^2y^2 - 3x^4y^4)$

$16x^6y^2 - 4x^3y - 8x^4y^5 = 4x^3y(4x^3y - 1 - 2xy^4)$

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

$9 - x^2 = (3 + x)(3 - x)$

$4a^2 - 36 = (2a + 6)(2a - 6)$

$9x^2 - 16 = (3x + 4)(3x - 4)$

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

$2x^2 - 18 = 2(x^2 - 9) = 2(x + 3)(x - 3)$

$75 - 3x^2 = 3(25 - x^2) = 3(5 + x)(5 - x)$

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

$y^2 + 6y + 9 = (y + 3)^2$

$x^2 + 2xy + y^2 = (x + y)^2$

$x^2 + 16x + 64 = (x + 8)^2$

$4x^2 + 16x + 16 = 4(x^2 + 4x + 4) = 4(x + 2)^2$

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

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

$x^2 - 2xy + y^2 = (x - y)^2$

$x^2 - 16x + 64 = (x - 8)^2$

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