

**Övningsblad i faktorisering**

Faktorisera så långt som möjligt/bryt ut största möjliga faktor

$2x^2 + 3x = \underline{\hspace{4cm}}$

$4x + 8 = \underline{\hspace{4cm}}$

$3a^4 + 11a^3 = \underline{\hspace{4cm}}$

$5x^2 + 25 = \underline{\hspace{4cm}}$

$33x^2 + 3y^2 = \underline{\hspace{4cm}}$

$7y^2 + 11y^2 = \underline{\hspace{4cm}}$

$14y^2 + 12 = \underline{\hspace{4cm}}$

$3x^2 - 9 = \underline{\hspace{4cm}}$

$5x^2 - 10y^2 = \underline{\hspace{4cm}}$

$4y^2 - 7y^2 = \underline{\hspace{4cm}}$

$5y^2 - 15 = \underline{\hspace{4cm}}$

$2x^2 + 6x = \underline{\hspace{4cm}}$

$4x^3 + 8x = \underline{\hspace{4cm}}$

$3a^4b^2 + 11a^3b = \underline{\hspace{4cm}}$

$35x^2 + 7x^9 = \underline{\hspace{4cm}}$

$9x^2 + 3x^3 = \underline{\hspace{4cm}}$

$7xy^2 + 11x^3y^2 = \underline{\hspace{4cm}}$

$6y^8 + 2y^{11} = \underline{\hspace{4cm}}$

$12x^2 - 6x^3 = \underline{\hspace{4cm}}$

$7x^2y - 11x^3y^4 = \underline{\hspace{4cm}}$

$49y^4 - 7y^6 = \underline{\hspace{4cm}}$

$6x^9y^8 + 12x^7y^{11} - 4x^5y^9 = \underline{\hspace{4cm}}$

$11x^4y^9 - 33x^3y^8 - 44x^4y^4 = \underline{\hspace{4cm}}$

$3x^2y^6 + 13x^9y^4 - 23x^5y^9 = \underline{\hspace{4cm}}$

$2x^9y^9 - 4x^7y^7 - 6x^5y^5 = \underline{\hspace{4cm}}$

$$2x^2 + 8x^4 = \underline{\hspace{4cm}}$$

$$8x + 2 = \underline{\hspace{4cm}}$$

$$a^2 + 11a^3 = \underline{\hspace{4cm}}$$

$$9x^2 - 3 = \underline{\hspace{4cm}}$$

$$10x^2 - 30x^3 = \underline{\hspace{4cm}}$$

$$16y^2 - 32y^3 = \underline{\hspace{4cm}}$$

$$2xy^2 + 8x^2y^3 = \underline{\hspace{4cm}}$$

$$6y^4 - 18y^6 = \underline{\hspace{4cm}}$$

$$2x^5y^5 - 4x^7y^7 - 6x^9y^9 = \underline{\hspace{4cm}}$$

$$16x^6y^2 - 4x^3y - 8x^4y^5 = \underline{\hspace{4cm}}$$

$$x^2 - 1 = \underline{\hspace{4cm}}$$

$$9 - x^2 = \underline{\hspace{4cm}}$$

$$4a^2 - 36 = \underline{\hspace{4cm}}$$

$$9x^2 - 16 = \underline{\hspace{4cm}}$$

$$x^2y^2 - 25 = \underline{\hspace{4cm}}$$

$$2x^2 - 18 = \underline{\hspace{4cm}}$$

$$75 - 3x^2 = \underline{\hspace{4cm}}$$

$$x^2 + 4x + 4 = \underline{\hspace{4cm}}$$

$$y^2 + 6y + 9 = \underline{\hspace{4cm}}$$

$$x^2 + 2xy + y^2 = \underline{\hspace{4cm}}$$

$$x^2 + 16x + 64 = \underline{\hspace{4cm}}$$

$$4x^2 + 16x + 16 = \underline{\hspace{4cm}}$$

$$x^2 - 4x + 4 = \underline{\hspace{4cm}}$$

$$y^2 - 6y + 9 = \underline{\hspace{4cm}}$$

$$x^2 - 2xy + y^2 = \underline{\hspace{4cm}}$$

$$x^2 - 16x + 64 = \underline{\hspace{4cm}}$$

$$4x^2 - 16x + 16 = \underline{\hspace{4cm}}$$

**Facit**

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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