

اتحاد مربع

$$(a+b)^2 = a^2 + 2ab + b^2$$

$$(a-b)^2 = a^2 - 2ab + b^2$$

اتحاد مزدوج

$$(a-b)(a+b) = a^2 - b^2$$

اتحاد مشترك

$$(x+a)(x+b) = x^2 + (a+b)x + ab$$

اتحاد مکعبات

$$a^3 + b^3 = (a+b)(a^2 - ab + b^2)$$

$$a^3 - b^3 = (a-b)(a^2 + ab + b^2)$$

اتحاد مکعب

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

$$(a-b)^3 = a^3 - 3a^2b + 3ab^2 - b^3$$

$$(x-6y)^2 = x^2 - 2(x \times 6y) + (6y)^2 = x^2 - 12xy + 36y^2$$

اتحاد مربع دو جمله‌ای

$$(x^2 - yz)^2 = (x^2)^2 - 2(x^2 \times yz) + (yz)^2 = x^4 - 2x^2yz + y^2z^2$$

$$(ax-3)^2 = (ax)^2 - 2(ax \times 3) + (3)^2 = a^2x^2 - 6ax + 9$$

$$(xy+3)^2 = (xy)^2 + 2(xy \times 3) + 3^2 = x^2y^2 + 6xy + 9$$

$$(2x+3)^2 = (2x)^2 + 2(2x \times 3) + (3)^2 = 4x^2 + 12x + 9$$

$$(2x+3y)^2 = (2x)^2 + 2(2x \times 3y) + (3y)^2 = 4x^2 + 12xy + 9y^2$$

$$(5x+2xy)^2 = (5x)^2 + 2(5x \times 2xy) + (2xy)^2 = 25x^2 + 20x^2y + 4x^2y^2$$

$$(y^2-1)^2 = (y^2)^2 - 2(y^2 \times 1) + (1)^2 = y^4 - 2y^2 + 1$$

$$(xz-y)^2 = (xz)^2 + 2(xz)(-y) + (-y)^2 = x^2z^2 - 2xzy + y^2$$

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

$$(3b - \sqrt{2}a)(3b + \sqrt{2}a) = (3b)^2 - (\sqrt{2}a)^2 = 9b^2 - 2a^2$$

$$\left(\frac{x}{2} - \frac{z}{3}\right)\left(\frac{x}{2} + \frac{z}{3}\right) = \left(\frac{x}{2}\right)^2 - \left(\frac{z}{3}\right)^2 = \frac{x^2}{4} - \frac{z^2}{9}$$

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

$$(x - \sqrt{2})(x + \sqrt{2}) = (x)^2 - (\sqrt{2})^2 = x^2 - 2$$

$$\left(\frac{1}{2} - x\right)\left(\frac{1}{2} + x\right) = \left(\frac{1}{2}\right)^2 - (x)^2 = \frac{1}{4} - x^2$$

اتحاد مزدوج



یوسفی پور



<https://telegram.me/Linkus1351>

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

$$\begin{array}{c} / \quad \text{بررسی!} \quad \backslash \\ (y)^2 \quad | \quad (3)^2 \\ \backslash \quad 2(y \times 3) \quad / \end{array}$$

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

$$\begin{array}{c} / \quad \text{بررسی!} \quad \backslash \\ (xy)^2 \quad | \quad (3)^2 \\ \backslash \quad 2(xy \times 3) \quad / \end{array}$$

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

$$\begin{array}{c} / \quad \text{بررسی!} \quad \backslash \\ (4a)^2 \quad | \quad (2)^2 \\ \backslash \quad 2(4a \times 2) \quad / \end{array}$$

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

$$\begin{array}{c} / \quad \text{بررسی!} \quad \backslash \\ (xy)^2 \quad | \quad (4)^2 \\ \backslash \quad 2(xy \times 4) \quad / \end{array}$$

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

$$\begin{array}{c} / \quad \text{بررسی!} \quad \backslash \\ (3x)^2 \quad | \quad (1)^2 \\ \backslash \quad 2(3x \times 1) \quad / \end{array}$$

$$4x^2 + 2x + \frac{1}{4} = \left(2x + \frac{1}{2}\right)^2$$

$$\begin{array}{c} / \quad \text{بررسی!} \quad \backslash \\ (2x)^2 \quad | \quad \left(\frac{1}{2}\right)^2 \\ \backslash \quad 2\left(2x \times \frac{1}{2}\right) \quad / \end{array}$$

$$a^2 + 6ab + 9b^2 = (a + 3b)^2$$

$$\begin{array}{c} / \quad \text{بررسی!} \quad \backslash \\ (a)^2 \quad | \quad (3b)^2 \\ \backslash \quad 2(a \times 3b) \quad / \end{array}$$

$$x^4 - 2x^2yz + y^2z^2 = (x^2 - yz)^2$$

$$\begin{array}{c} / \quad \text{بررسی!} \quad \backslash \\ (x^2)^2 \quad | \quad (yz)^2 \\ \backslash \quad 2(x^2 \times yz) \quad / \end{array}$$

اتحاد: مربع دو جمله ای و مزدوج

yousefi pour

$$2 - a^2 = (\sqrt{2} - a)(\sqrt{2} + a)$$

$$\begin{array}{c} / \quad \backslash \\ (\sqrt{2})^2 \quad (a)^2 \\ \backslash \quad / \end{array}$$

$$16x^2 - 36y^2 = (4x - 6y)(4x + 6y)$$

$$\begin{array}{c} / \quad \backslash \\ (4x)^2 \quad (6y)^2 \\ \backslash \quad / \end{array}$$

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

$$\begin{array}{c} / \quad \backslash \\ (2x)^2 \quad (y)^2 \\ \backslash \quad / \end{array}$$

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

$$\begin{array}{c} / \quad \backslash \\ (xy^2)^2 \quad (3z)^2 \\ \backslash \quad / \end{array}$$

$$\frac{x^2}{4} - \frac{1}{25} = \left(\frac{x}{2} - \frac{1}{5}\right)\left(\frac{x}{2} + \frac{1}{5}\right)$$

$$\begin{array}{c} / \quad \backslash \\ \left(\frac{x}{2}\right)^2 \quad \left(\frac{1}{5}\right)^2 \\ \backslash \quad / \end{array}$$

$$4x^2 - 9 = (ax - by)(ax + by)$$

$$\begin{array}{c} / \quad \backslash \\ (ax)^2 \quad (by)^2 \\ \backslash \quad / \end{array}$$

$$\frac{x^2}{4} - \frac{z^2}{9} = \left(\frac{x}{2} - \frac{z}{3}\right)\left(\frac{x}{2} + \frac{z}{3}\right)$$

$$\begin{array}{c} / \quad \backslash \\ \left(\frac{x}{2}\right)^2 \quad \left(\frac{z}{3}\right)^2 \\ \backslash \quad / \end{array}$$

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

$$\begin{array}{c} / \quad \backslash \\ (2x)^2 \quad (3)^2 \\ \backslash \quad / \end{array}$$