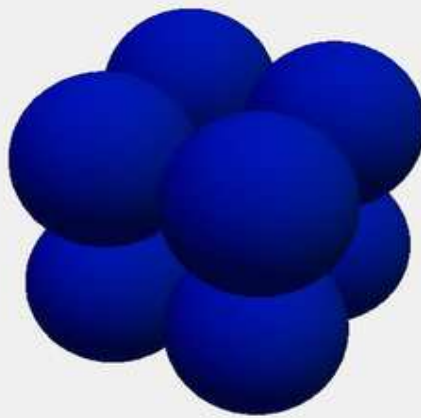


# MathCon

*The Mathematics Firm*

## Ejercicios de Factorizar Trinomios Cuadrados Perfectos y diferencia de cuadrados

Lista de Ejercicios



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## Factorización de trinomios

Factorizar los siguientes trinomios cuadrados perfectos.

1.  $4x^2 + 16x - 9y^2 + 16$  Sol:  $(4 + 2x - 3y)(4 + 2x + 3y)$
2.  $16x^2 + 16x - 64y^2 + 4$  Sol:  $4(2x - 4y + 1)(2x + 4y + 1)$
3.  $64x^2 + 48x - 100y^2 + 9$  Sol:  $(8x - 10y + 3)(8x + 10y + 3)$
4.  $81x^2 + 144x - 49y^2 + 64$  Sol:  $(9x - 7y + 8)(9x + 7y + 8)$
5.  $64x^2 + 256x - 4y^2 + 256$  Sol:  $4(4x - y + 8)(4x + y + 8)$
6.  $256x^2 + 256x - 25y^2 + 64$  Sol:  $(16x - 5y + 8)(16x + 5y + 8)$
7.  $169x^2 + 520x - 81y^2 + 400$  Sol:  $(13x - 9y + 20)(13x + 9y + 20)$
8.  $9x^2 + 108x - 289y^2 + 324$  Sol:  $(3x - 17y + 18)(3x + 17y + 18)$
9.  $225x^2 + 330x - 25y^2 + 121$  Sol:  $(15x - 5y + 11)(15x + 5y + 11)$
10.  $225x^2 + 180x - 9y^2 + 36$  Sol:  $9(5x - y + 2)(5x + y + 2)$
11.  $25x^2 + 50xz - 9y^2 + 25z^2$  Sol:  $(5x + 5z - 3y)(5x + 3y + 5z)$
12.  $9x^2 + 24xz - 16y^2 + 16z^2$  Sol:  $(3x - 4y + 4z)(3x + 4y + 4z)$
13.  $4x^2 + 8xz - 16y^2 + 4z^2$  Sol:  $4(x - 2y + z)(x + 2y + z)$
14.  $49x^2 + 126xz - 16y^2 + 81z^2$  Sol:  $(7x - 4y + 9z)(7x + 4y + 9z)$
15.  $289x^2 + 646xz - 144y^2 + 361z^2$  Sol:  $(17x - 12y + 19z)(17x + 12y + 19z)$
16.  $49x^2 + 42xz - 400y^2 + 9z^2$  Sol:  $(7x - 20y + 3z)(7x + 20y + 3z)$
17.  $196x^2 + 112xz - 361y^2 + 16z^2$  Sol:  $(14x - 19y + 4z)(14x + 19y + 4z)$
18.  $400x^2 + 280xz - 324y^2 + 49z^2$  Sol:  $(20x - 18y + 7z)(20x + 18y + 7z)$
19.  $-4w^2 - 12wy + 16x^2 + 16xz - 9y^2 + 4z^2$  Sol:  $(-2w + 4x - 3y + 2z)(2w + 4x + 3y + 2z)$
20.  $-16w^2 - 24wy + 25x^2 + 20xz - 9y^2 + 4z^2$  Sol:  $(-4w + 5x - 3y + 2z)(4w + 5x + 3y + 2z)$
21.  $-9w^2 - 30wy + 16x^2 + 40xz - 25y^2 + 25z^2$  Sol:  $(-3w + 4x - 5y + 5z)(3w + 4x + 5y + 5z)$
22.  $-16w^2 - 72wy + 25x^2 + 100xz - 81y^2 + 100z^2$  Sol:  
 $(-4w + 5x - 9y + 10z)(4w + 5x + 9y + 10z)$
23.  $-4w^2 - 32wy + 100x^2 + 140xz - 64y^2 + 49z^2$  Sol:  
 $(-2w + 10x - 8y + 7z)(2w + 10x + 8y + 7z)$
24.  $-4w^2 - 32wy + 36x^2 + 60xz - 64y^2 + 25z^2$  Sol:  $(-2w + 6x - 8y + 5z)(2w + 6x + 8y + 5z)$
25.  $-64w^2 - 80wy + 36x^2 + 120xz - 25y^2 + 100z^2$  Sol:  
 $(-8w + 6x - 5y + 10z)(8w + 6x + 5y + 10z)$
26.  $-4w^2 - 24wy + 25x^2 + 100xz - 36y^2 + 100z^2$  Sol:  
 $(-2w + 5x - 6y + 10z)(2w + 5x + 6y + 10z)$

27.  $-64w^2 - 128wy + 100x^2 + 60xz - 64y^2 + 9z^2$  Sol:  
 $(-8w + 10x - 8y + 3z)(8w + 10x + 8y + 3z)$
28.  $-36w^2 - 48wy + 36x^2 + 60xz - 16y^2 + 25z^2$  Sol:  
 $(-6w + 6x - 4y + 5z)(6w + 6x + 4y + 5z)$
29.  $-9w^2 - 42wy + 64x^2 + 160xz - 49y^2 + 100z^2$  Sol:  
 $(-3w + 8x - 7y + 10z)(3w + 8x + 7y + 10z)$
30.  $-16w^2 - 56wy + 16x^2 + 112xz - 49y^2 + 196z^2$  Sol:  
 $(-4w + 4x - 7y + 14z)(4w + 4x + 7y + 14z)$
31.  $-144w^2 - 312wy + 100x^2 + 40xz - 169y^2 + 4z^2$  Sol:  
 $(-12w + 10x - 13y + 2z)(12w + 10x + 13y + 2z)$
32.  $-64w^2 - 240wy + 144x^2 + 312xz - 225y^2 + 169z^2$  Sol:  
 $(-8w + 12x - 15y + 13z)(8w + 12x + 15y + 13z)$
33.  $-100w^2 - 60wy + 25x^2 + 120xz - 9y^2 + 144z^2$  Sol:  
 $(-10w + 5x - 3y + 12z)(10w + 5x + 3y + 12z)$
34.  $-196w^2 - 224wy + 81x^2 + 126xz - 64y^2 + 49z^2$  Sol:  
 $(-14w + 9x - 8y + 7z)(14w + 9x + 8y + 7z)$
35.  $-196w^2 - 364wy + 169x^2 + 182xz - 169y^2 + 49z^2$  Sol:  
 $(-14w + 13x - 13y + 7z)(14w + 13x + 13y + 7z)$
36.  $-361w^2 - 722wy + 225x^2 + 210xz - 361y^2 + 49z^2$  Sol:  
 $(-19w + 15x - 19y + 7z)(19w + 15x + 19y + 7z)$
37.  $-144w^2 - 144wy + 36x^2 + 132xz - 36y^2 + 121z^2$  Sol:  
 $(-12w + 6x - 6y + 11z)(12w + 6x + 6y + 11z)$
38.  $-225w^2 - 540wy + 400x^2 + 640xz - 324y^2 + 256z^2$  Sol:  
 $(-15w + 20x - 18y + 16z)(15w + 20x + 18y + 16z)$
39.  $-225w^2 - 600wy + 49x^2 + 168xz - 400y^2 + 144z^2$  Sol:  
 $(-15w + 7x - 20y + 12z)(15w + 7x + 20y + 12z)$
40.  $-361w^2 - 380wy + 25x^2 + 110xz - 100y^2 + 121z^2$  Sol:  
 $(-19w + 5x - 10y + 11z)(19w + 5x + 10y + 11z)$
41.  $-144w^2 - 216wy + 324x^2 + 288xz - 81y^2 + 64z^2$  Sol:  
 $(-12w + 18x - 9y + 8z)(12w + 18x + 9y + 8z)$
42.  $-64w^2 - 240wy^2 + 49x^2 + 70xz - 225y^4 + 25z^2$  Sol:  
 $(-8w + 7x - 15y^2 + 5z)(8w + 7x + 15y^2 + 5z)$
43.  $-144w^2 - 72wy^4 + 324x^2 + 720xz - 9y^8 + 400z^2$  Sol:  
 $(-12w + 18x - 3y^4 + 20z)(12w + 18x + 3y^4 + 20z)$
44.  $-400w^2 - 120wy^2 + 25x^2 + 90xz - 9y^4 + 81z^2$  Sol:  
 $(-20w + 5x - 3y^2 + 9z)(20w + 5x + 3y^2 + 9z)$
45.  $-289w^2 - 374wy^2 + 225x^2 + 330xz - 121y^4 + 121z^2$  Sol:  
 $(-17w + 15x - 11y^2 + 11z)(17w + 15x + 11y^2 + 11z)$
46.  $-225w^2 - 510wy^2 + 225x^2 + 240xz - 289y^4 + 64z^2$  Sol:  
 $(-15w + 15x - 17y^2 + 8z)(15w + 15x + 17y^2 + 8z)$

47.  $-225w^2 - 240wy^3 + 400x^2 + 440xz - 64y^6 + 121z^2$  Sol:  
 $(-15w + 20x - 8y^3 + 11z)(15w + 20x + 8y^3 + 11z)$

48.  $-256w^4 - 416w^2y^2 + 81x^2 + 36xz - 169y^4 + 4z^2$  Sol:  
 $(-16w^2 + 9x - 13y^2 + 2z)(16w^2 + 9x + 13y^2 + 2z)$

49.  $-256w^4 - 192w^2y^2 + 324x^2 + 108xz - 36y^4 + 9z^2$  Sol:  
 $(-16w^2 + 18x - 6y^2 + 3z)(16w^2 + 18x + 6y^2 + 3z)$

50.  $-4w^8 - 60w^4y^4 + 400x^2 + 680xz - 225y^8 + 289z^2$  Sol:  
 $(-2w^4 + 20x - 15y^4 + 17z)(2w^4 + 20x + 15y^4 + 17z)$