

נוסחאות הכפל המקוצר - ריבוע הסכום

| | | | |
|-----|----------------|-----|----------------|
| 1. | $(x+4)^2 =$ | 11. | $(6-x)^2 =$ |
| 2. | $(6+y)^2 =$ | 12. | $(t-10)^2 =$ |
| 3. | $(9+t)^2 =$ | 13. | $(8-3x)^2 =$ |
| 4. | $(3x+3)^2 =$ | 14. | $(-7+x)^2 =$ |
| 5. | $(5+2y)^2 =$ | 15. | $(-8+2y)^2 =$ |
| 6. | $(5x+10y)^2 =$ | 16. | $(-3a+9b)^2 =$ |
| 7. | $(8a+3b)^2 =$ | 17. | $(x-yz)^2 =$ |
| 8. | $(11x+2y)^2 =$ | 18. | $(-3ab+b)^2 =$ |
| 9. | $(4p+12t)^2 =$ | 19. | $(4p-xy)^2 =$ |
| 10. | $(8x+9y)^2 =$ | 20. | $(9a-5d)^2 =$ |

נוסחאות הכפל המקוצר - ריבוע הסכום - תשובות

| | | | |
|-----|---------------------------------------|-----|--------------------------------------|
| 1. | $(x+4)^2 = x^2 + 8x + 16$ | 11. | $(6-x)^2 = 36 - 12x + x^2$ |
| 2. | $(6+y)^2 = 36 + 12y + y^2$ | 12. | $(t-10)^2 = t^2 - 20t + 100$ |
| 3. | $(9+t)^2 = 81 + 18t + t^2$ | 13. | $(8-3x)^2 = 64 - 48x + 9x^2$ |
| 4. | $(3x+3)^2 = 9x^2 + 18x + 9$ | 14. | $(-7+x)^2 = 49 - 14x + x^2$ |
| 5. | $(5+2y)^2 = 25 + 20y + 4y^2$ | 15. | $(-8+2y)^2 = 64 - 32y + 4y^2$ |
| 6. | $(5x+10y)^2 = 25x^2 + 100xy + 100y^2$ | 16. | $(-3a+9b)^2 = 9a^2 - 54ab + 81b^2$ |
| 7. | $(8a+3b)^2 = 64a^2 + 48ab + 9b^2$ | 17. | $(x-yz)^2 = x^2 - 2xyz + y^2z^2$ |
| 8. | $(11x+2y)^2 = 121x^2 + 44xy + 4y^2$ | 18. | $(-3ab+b)^2 = 9a^2b^2 - 6ab^2 + b^2$ |
| 9. | $(4p+12t)^2 = 16p^2 + 96pt + 144t^2$ | 19. | $(4p-xy)^2 = 16p^2 - 8pxy + x^2y^2$ |
| 10. | $(8x+9y)^2 = 64x^2 + 144xy + 81y^2$ | 20. | $(9a-5d)^2 = 81a^2 - 90ad + 25d^2$ |

נוסחאות כפל מקוצר – הפרש ריבועים

| | | | |
|-----|----------------------|-----|-------------------------|
| 1. | $(x+5)(x-5) =$ | 11. | $(6x-9y)(6x+9y) =$ |
| 2. | $(6+y)(6-y) =$ | 12. | $(t+8)(-8+t) =$ |
| 3. | $(t-7)(t+7) =$ | 13. | $(1+6x)(-6x+1) =$ |
| 4. | $(1-p)(1+p) =$ | 14. | $(4+ptz)(-ptz+4) =$ |
| 5. | $(2x+5)(2x-5) =$ | 15. | $(-12k+kn)(kn+12k) =$ |
| 6. | $(7x+4)(7x-4) =$ | 16. | $(8x+6y)(8x-6y) =$ |
| 7. | $(8-3x)(8+3x) =$ | 17. | $(3r+11t)(3r-11t) =$ |
| 8. | $(9a+10b)(9a-10b) =$ | 18. | $(-ax+bx)(bx+ax) =$ |
| 9. | $(yz-2)(yz+2) =$ | 19. | $(-13c+10d)(13d+10c) =$ |
| 10. | $(xy-tz)(xy+tz) =$ | 20. | $(2x+3y)(2y+3x) =$ |

נוסחאות הכפל המקוצר-הפרש ריבועים - פתרונות

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|-----|-------------------------------------|-----|---|
| 1. | $(x+5)(x-5) = x^2 - 25$ | 11. | $(6x-9y)(6x+9y) = 36x^2 - 81y^2$ |
| 2. | $(6+y)(6-y) = 36 - y^2$ | 12. | $(t+8)(-8+t) = t^2 - 64$ |
| 3. | $(t-7)(t+7) = t^2 - 49$ | 13. | $(1+6x)(-6x+1) = 1 - 36x^2$ |
| 4. | $(1-p)(1+p) = 1 - p^2$ | 14. | $(4+ptz)(-ptz+4) = 16 - p^2t^2z^2$ |
| 5. | $(2x+5)(2x-5) = 4x^2 - 25$ | 15. | $(-12k+kn)(kn+12k) = k^2n^2 - 144k^2$ |
| 6. | $(7x+4)(7x-4) = 49x^2 - 16$ | 16. | $(8x+6y)(8x-6y) = 64x^2 - 36y^2$ |
| 7. | $(8-3x)(8+3x) = 64 - 9x^2$ | 17. | $(3r+11t)(3r-11t) = 9r^2 - 121t^2$ |
| 8. | $(9a+10b)(9a-10b) = 81a^2 - 100b^2$ | 18. | $(-ax+bx)(bx+ax) = b^2x^2 - a^2x^2$ |
| 9. | $(yz-2)(yz+2) = y^2z^2 - 4$ | 19. | $(-13c+10d)(13d+10c) =$ $-169cd - 130c^2 + 130d^2 + 100cd =$ $130d^2 - 69cd - 130c^2$ |
| 10. | $(xy-tz)(xy+tz) = x^2y^2 - t^2z^2$ | 20. | $(2x+3y)(2y+3x) =$ $4xy + 6x^2 + 6y^2 + 9xy =$ $6x^2 + 13xy + 6y^2$ |

פירוק ע"פ נוסחאות כפל מקוצר

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|-----|-------------------|-----|----------------------------|
| 1. | $y^2 - 16 =$ | 11. | $x^2 + 4x + 4 =$ |
| 2. | $25 - x^2 =$ | 12. | $y^2 - 10y + 25 =$ |
| 3. | $4a^2 - 1 =$ | 13. | $121 + 22a + a^2 =$ |
| 4. | $-9y^2 + 49 =$ | 14. | $196 - 28z + z^2 =$ |
| 5. | $144 - 25x^2 =$ | 15. | $4x^2 + 12xy + 9y^2 =$ |
| 6. | $-121x^2 + y^2 =$ | 16. | $64a^2 - 96ab + 36b^2 =$ |
| 7. | $81a^2 - 64b^2 =$ | 17. | $100t^2 - 180tv + 81v^2 =$ |
| 8. | $-t^2 - 4 =$ | 18. | $30xy + 9x^2 + 25y^2 =$ |
| 9. | $75x^2 - 12y^2 =$ | 19. | $16a^2 + 64z^2 - 64az =$ |
| 10. | $32x^2 - 8y^2 =$ | 20. | $-28mn + 49m^2 + 4n^2 =$ |

פתרונות-פירוק עפ"י נוסחאות הכפל המקוצר

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|-----|---------------------------------------|-----|---|
| 1. | $y^2 - 16 = (y + 4)(y - 4)$ | 11. | $x^2 + 4x + 4 = (x + 2)^2$ |
| 2. | $25 - x^2 = (5 + x)(5 - x)$ | 12. | $y^2 - 10y + 25 = (y - 5)^2$ |
| 3. | $4a^2 - 1 = (2a + 1)(2a - 1)$ | 13. | $121 + 22a + a^2 = (11 + a)^2$ |
| 4. | $-9y^2 + 49 = (7 + 3y)(7 - 3y)$ | 14. | $196 - 28z + z^2 = (14 - z)^2$ |
| 5. | $144 - 25x^2 = (12 - 5x)(12 + 5x)$ | 15. | $4x^2 + 12xy + 9y^2 = (2x + 3y)^2$ |
| 6. | $-121x^2 + y^2 = (y + 11x)(y - 11x)$ | 16. | $64a^2 - 96ab + 36b^2 = (8a - 6b)^2$ |
| 7. | $81a^2 - 64b^2 = (9a + 8b)(9a - 8b)$ | 17. | $100t^2 - 180tv + 81v^2 = (10t - 9v)^2$ |
| 8. | $-t^2 - 4 = -(t^2 + 4)$ | 18. | $30xy + 9x^2 + 25y^2 = (3x + 5y)^2$ |
| 9. | $75x^2 - 12y^2 = 3(5x + 2y)(5x - 2y)$ | 19. | $16a^2 + 64z^2 - 64az = (4a - 8z)^2$ |
| 10. | $32x^2 - 8y^2 = 2(4x + 2y)(4x - 2y)$ | 20. | $-28mn + 49m^2 + 4n^2 = (7m - 2n)^2$ |