*Сворачивание кубов*

*1) 28x^3 + 3x^2 + 3x + 1 = 0*

*2) 126x^3 − 3x^2 + 3x − 1 = 0*

*x^3 + 27x^3 + 3x^2 + 3x + 1 = 0*

*27x^3 + x^3 + 3*x^2 + 3x + 1 = 0*

*27x^3 + x^3 + 3*x^2*1 + 3x*1^2 + 1^3 = 0*

*27x^3 + (x+1)^3 = 0*

*(3x)^3 + (x+1)^3 = 0*

*(3x + (x+1))( 9x^2 - 3x(x+1) + (x+1)^2 ) = 0*

*(3x+x+1) = 0*

*4x = -1*

*x = -¼*

*9x^2 - 3x(x+1) + (x+1)^2 = 0*

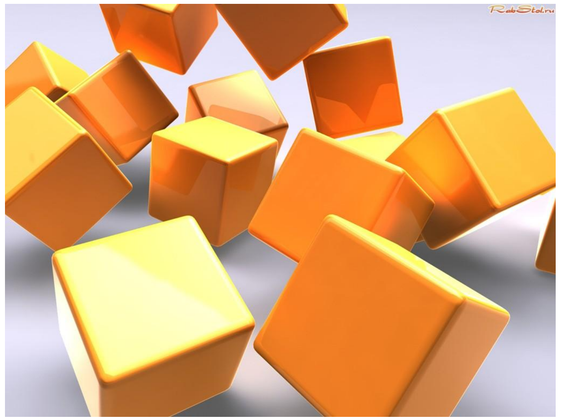
*9x^2 - 3x^2 -3x + x^2+2x+1 = 0*

*7x^2 -x + 1 = 0*

*D = 1 -28 = -27*

*нет решений*

*ответ : -¼*



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

a^3-b^3=

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

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

*2) 126x^3 − 3x^2 + 3x − 1 = 0*

125x^3+x^3 - 3x^2 +3x -1 = 0

125x^3+ x^3 -3x^2*1+ 3x*1^2-1^3=0

125x^3 + (x-1)^3=0

(5x)^3 + (x-1)^3 = 0

( 5x+x-1 ) ( (5x)^2-5x*(x-1) + (x-1)^2 )=0

0 or 0

6x-1=0

x=⅙

25x^2 - 5x^2 + 5x + x^2 - 2x + 1 = 0

21x^2 + 3x + 1 = 0

D = 9-4(21)1 = 9 - 84 = -75 /// нет решений

Ответ : 1/6