

Сворачивание кубов

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

$$2) 126x^3 - 3x^2 + 3x - 1 = 0$$

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

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

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

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

$$(4x+1)(7x^2-x+1) = 0$$

$$4x+1=0 \quad 7x^2-x+1=0$$

$$x=0.25 \quad \text{корней нет}$$

$$2) 126x^3 - 3x^2 + 3x - 1 = 0$$

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

$$125x^3 + (x-1)^3$$

$$(5x+x-1)(25x^2-5x(x-1)+(x-1)^2) = 0$$

$$(5x+x-1)(25x^2-5x^2+5x+x^2-2x+1) = 0$$

$$(6x-1)(21x^2+3x+1) = 0$$

$$6x=1 \quad 21x^2+3x+1=0$$

$$x=\frac{1}{6} \quad D=9-\dots$$

решения нет

