

Подстановка среднего арифметического и доказательство о не существовании корней

$$x^5 + (x - 2)^5 = 32$$

$$\begin{aligned}
 x^5 + (x - 2)^5 &= 32 \\
 t &= x - 1 \\
 (t + 1)^5 + (t - 1)^5 &= 32 \\
 t^5 + 5t^4 + 10t^3 + 10t^2 + 5t + 1 + t^5 - 5t^4 + 10t^3 - 10t^2 + 5t - 1 &= 32 \\
 2t^5 + 20t^3 + 10t &= 32 \quad | :2 \\
 t^5 + 10t^3 + 5t - 16 &= 0
 \end{aligned}$$

$$\begin{aligned}
 &+-1, +-2, +-4, +-8, +-16 \\
 t &= 1
 \end{aligned}$$

$$t^4 + t^3 + 11t^2 + 11t + 16 = 0$$

$$-2; -4; -8; -16$$

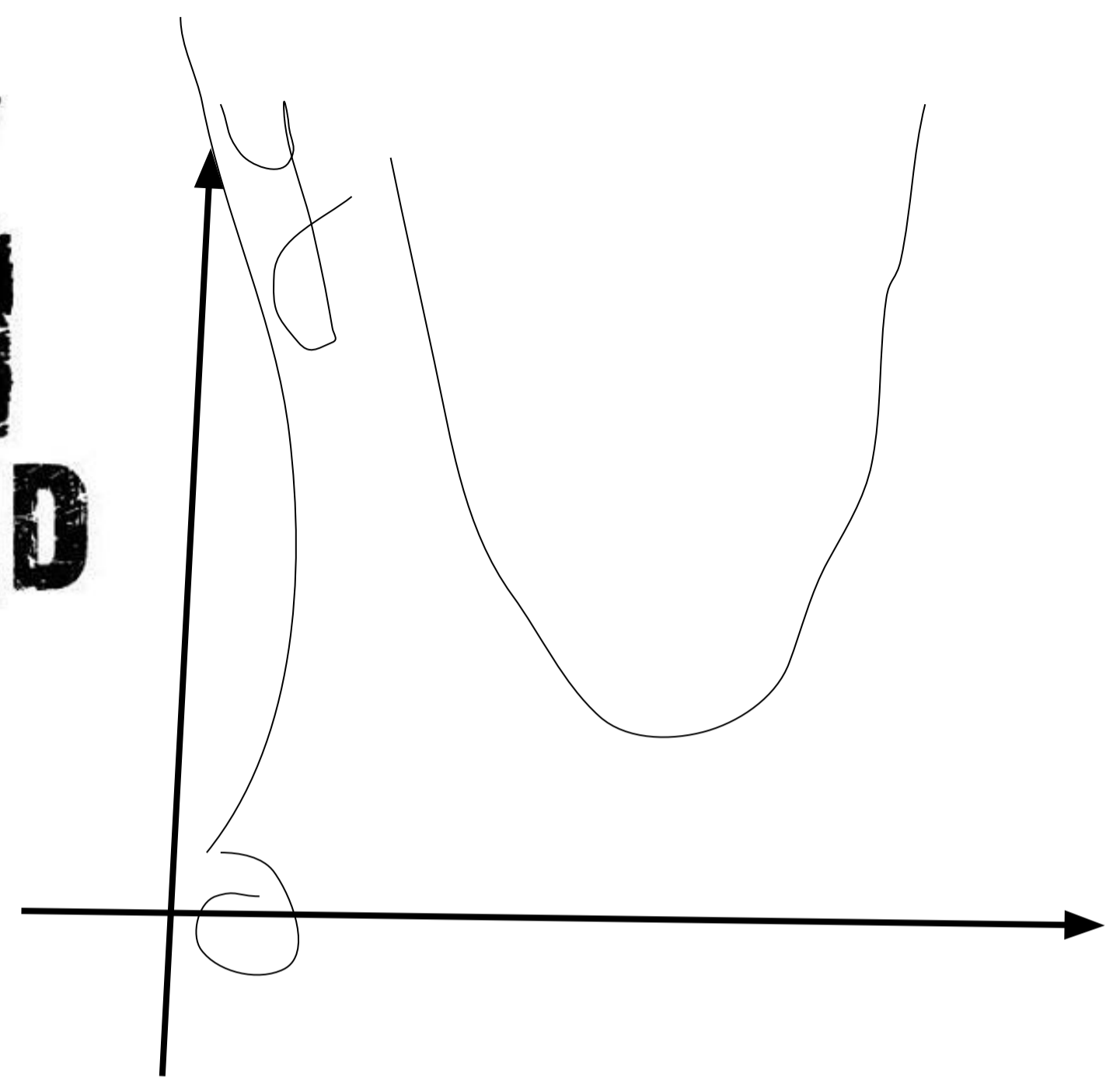
$$a^2 + 2ab + b^2 = ()^2 \quad a = t^2$$

$$(t^2)^2 + 2t^2 * t/2 + (t/2)^2 - (t/2)^2 + 11t^2 + 11t + 16 = 0$$

$$(t^2 + t/2)^2 + 43t^2/4 + 11t + 16 = 0$$

$$D = 121 - 4 * 43/4 * 16 \quad D < 0$$

**404**  
**NOT FOUND**



	1	0	10	0	5	-16
1	1	1	11	11	16	0