

$$2\cos 2x + \sin 2x \geq \operatorname{tg} x$$

$$2\cos 2x + \sin 2x - \sin x / \cos x \geq 0$$

$$2\operatorname{tg} x / (1 + \operatorname{tg}^2 x) + 2(1 - \operatorname{tg}^2 x) / (1 + \operatorname{tg}^2 x) - \operatorname{tg} x \geq 0$$

$$\operatorname{tg} x = t$$

$$2t / (1 + t^2) + (2 - 2t^2) / (1 + t^2) - t \geq 0$$

$$(2t + 2 - 2t^2) / (1 + t^2) - t(1 + t^2) / (1 + t^2) \geq 0$$

$$(2t + 2 - 2t^2 - t(1 + t^2)) / (1 + t^2) \geq 0$$

$$(2t + 2 - 2t^2 - t - t^3) / (1 + t^2) \geq 0$$

$$(-t^3 - 2t^2 + t + 2) / (1 + t^2) \geq 0$$

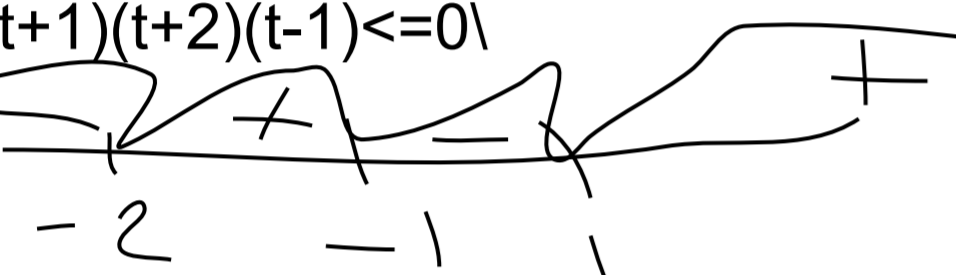
$$(1 + t^2) > 0$$

$$-t^2 - 3t - 2 = 0$$

$$t^2 + 3t + 2 = 0$$

$$(t + 1)(t + 2) = 0$$

вместе $-(t + 1)(t + 2)(t - 1) \geq 0$

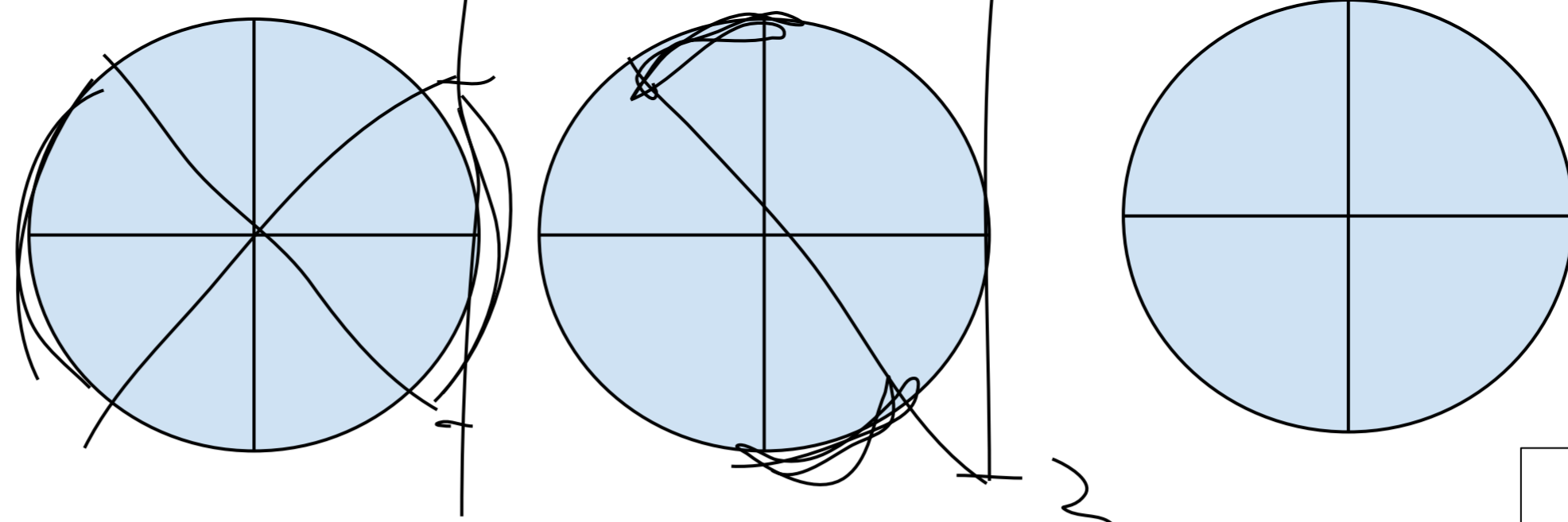
$$(t + 1)(t + 2)(t - 1) \leq 0$$


$$t \in (-\infty; -2] \cup [-1; 1]$$

$$\operatorname{tg} x \leq -2$$

$$-1 \leq \operatorname{tg} x \leq 1$$

$$x \in [-\pi/4 + \pi k; \pi/4 + \pi k] \cup (-\pi/2 + \pi k; \operatorname{arctg}(-2) + \pi k]$$



	-1	-2	1	2
1	-1	-3	-2	0

ПРОСТЕЙШИЕ НЕРАВЕНСТВА 03

$$2\cos 2x + \sin 2x \geq \operatorname{tg} x$$