

$$|\operatorname{ctg} x| \geq 1/\sqrt{3}$$

$$-P/3 + Pk \leq x \leq P/3 + Pk$$

$$x \neq Pt$$

ОТВЕТ  $x \in (Pk; P/3 + Pk) \cup (2P/3 + Pk; P + Pk)$

$$\sin^2 x - \sqrt{2}/2 \sin x < 0$$

$$\sin x (\sin x - \sqrt{2}/2) < 0$$

$$\sin x - \sqrt{2}/2 = 0$$

$$\sin x = \sqrt{2}/2$$

$$x = P/4 + 2Pk$$

$$x = 3P/4 + 2Pk$$

$$\sin x = 0$$

$$x = Pk$$

ОТВЕТ  $x \in (3P/4 + 2Pk; P + 2Pk) \cup (2Pk; P/4 + 2Pk)$

$$(\cos x + \sqrt{3}/2)(\cos x + \sqrt{3}) > 0$$

$$\cos x + \sqrt{3}/2 = 0$$

$$\cos x = -\sqrt{3}/2$$

$$x = \pm 5P/6 + 2Pk$$

$$\cos x + \sqrt{3} = 0$$

$$\cos x = -\sqrt{3}$$

$-\sqrt{3} < -1$  - нет решений

$$\cos x + \sqrt{3} > 0$$

$$\cos x + \sqrt{3}/2 > 0$$

$$-5P/6 + 2Pk < x < 5P/6 + 2Pk$$

ОТВЕТ  $x \in (-5P/6 + 2Pk; 5P/6 + 2Pk)$

$$\operatorname{ctg} x - 4/\operatorname{ctg} x + 3 \geq 0$$

$$\operatorname{ctg} x \neq 0$$

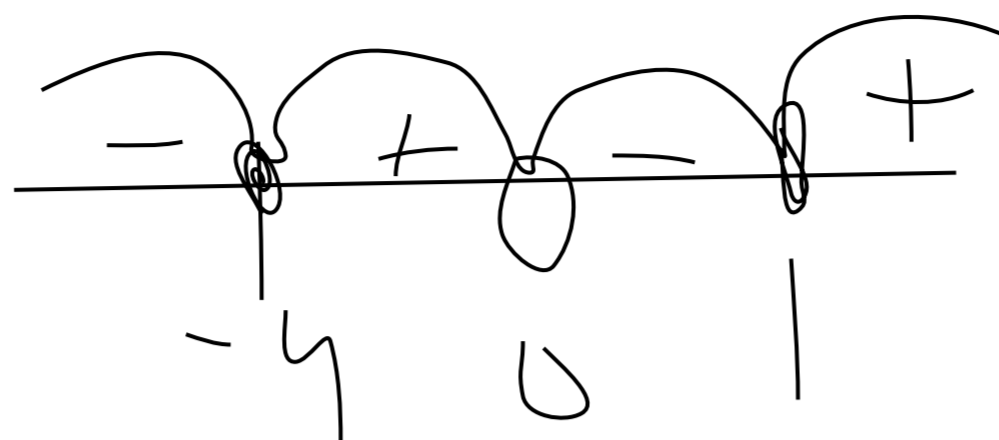
$$x \neq P/2 + Ph$$

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

$$(t^2 + 3t - 4)/t \geq 0$$

$$(t+4)(t-1)/t \geq 0$$

$$(t+4)(t-1)/t \geq 0$$



$$t \in [-4; 0) \cup [1; +\infty]$$

$$\{\operatorname{ctg} x \geq -4$$

$$\{\operatorname{ctg} x < 0$$

$$P/2 + Pk < x \leq \operatorname{arccot}(-4) + Pk$$

$$\operatorname{ctg} x \geq 1$$

$$x \in (Pk; P/4 + Pk]$$

ОТВЕТ  $x \in (P/2 + Pk; \operatorname{arccot}(-4) + Pk] \cup (Pk; P/4 + Pk]$

## ПРОСТЕЙШИЕ НЕРАВЕНСТВА 02

$$|\operatorname{ctg} x| \geq 1/\sqrt{3}$$

$$\sin^2 x - \sqrt{2}/2 \sin x < 0$$

$$(\cos x + \sqrt{3}/2)(\cos x + \sqrt{3}) > 0$$

$$\operatorname{ctg} x - 4/\operatorname{ctg} x + 3 \geq 0$$

