

$$\operatorname{tg}^2 x - 3\operatorname{tg} x + 2\sin x / \cos^3 x = 3 / \cos^2 x - 1 / \cos^4 x$$

$$\operatorname{tg}^2 x + 2\sin x / \cos^3 x + 1 / \cos^4 x = 3 / \cos^2 x + 3\operatorname{tg} x$$

$$(\operatorname{tg} x + 1 / \cos^2 x)^2 = 3(1 / \cos^2 x + \operatorname{tg} x)$$

$$\operatorname{tg} x + 1 / \cos^2 x = y$$

$$y^2 - 3y = 0$$

$$y(y-3) = 0$$

$$y = 0 \quad y = 3$$

$$1 / \cos^2 x + \operatorname{tg} x = 0$$

$$\operatorname{tg}^2 x + \operatorname{tg} x + 1 = 0$$

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

$$z^2 + z + 1 = 0$$

Нет кор

$$1 / \cos^2 x + \operatorname{tg} x = 3$$

$$\operatorname{tg}^2 x + \operatorname{tg} x - 2 = 0$$

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

$$z^2 + z - 2 = 0$$

$$z_1 = 1$$

$$z_2 = -2$$

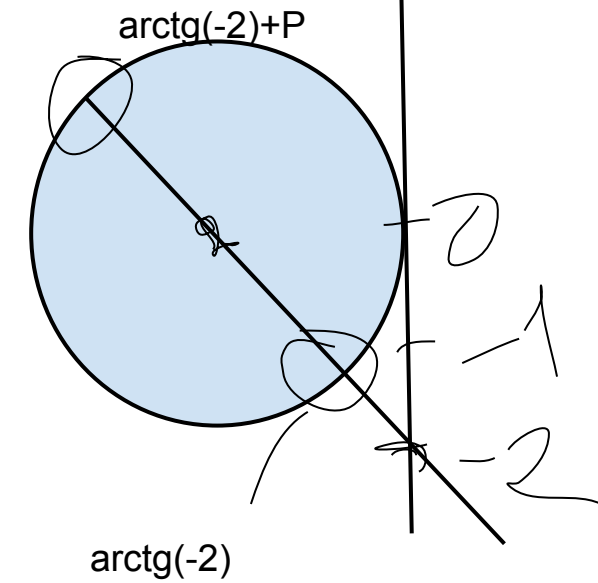
$$\operatorname{tg} x = 1$$

$$x = \pi/4 + \pi k$$

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

$$x = \operatorname{arctg}(-2) + \pi k$$

Отв:  $\pi/4 + \pi k$ ;  $\operatorname{arctg}(-2) + \pi k$



$$\begin{aligned} 1 + \operatorname{tg}^2 x &= 1 + (\sin x / \cos x)^2 = \\ &= 1 + \sin^2 x / \cos^2 x = \\ &= \cos^2 x + \sin^2 x / \cos^2 x = \\ &= 1 / \cos^2 x \end{aligned}$$