

$$x^2 \operatorname{tg}^2 y (x \operatorname{tg}^2 y - 2) = 1 - 2x$$

$$\operatorname{arctg}(x \operatorname{tgy}) = 2y$$

$$x \operatorname{tgy} = \operatorname{tg}(2y)$$

$$x = \operatorname{tg} 2y / \operatorname{tgy} = (2 \operatorname{tgy} / (1 - \operatorname{tg}^2 2y)) / \operatorname{tgy} = 2 / (1 - \operatorname{tg}^2 2y)$$

$$x^2 \operatorname{tg}^2 2y (\operatorname{tg}^2 2y - 2) = 1 - 2x$$

$$2x = 1 - x^2 \operatorname{tg}^2 2y (\operatorname{tg}^2 2y - 2)$$

$$x = 1/2 - x^2 \operatorname{tg}^2 2y (\operatorname{tg}^2 2y - 2) / 2$$

$$2 / (1 - \operatorname{tg}^2 2y) = 1/2 - (4 / (1 - \operatorname{tg}^2 2y)^2)$$

$$x = 2 / (1 - \operatorname{tg}^2 2y)$$

$$x^2 \operatorname{tg}^2 2y (\operatorname{tg}^2 2y - 2) = 1 - 2x$$

$$\operatorname{tg}^2 2y = t$$

$$x^2 t (t - 2) = 1 - 2x$$

$$x = 2 / (1 - t)$$

$$4t(t - 2) / (1 - t)^2 = 1 - 4 / (1 - t)$$

$$4t(t - 2) = 1 - 2t + t^2 - 4 + 4t$$

$$4t^2 - 8t = 2t + t^2 - 3$$

$$3t^2 - 10t + 3 = 0$$

$$D/4 = 25 - 9 = 16$$

$$x_1 = (5 + 4) / 3 = 3$$

$$x_2 = (5 - 4) / 3 = 1/3$$

$$\operatorname{tg}^2 2y = 3$$

$$\operatorname{tgy} = \pm \sqrt{3}$$

$$y = \pm P/3 + PK$$

$$\operatorname{tg}^2 2y = 1/3$$

$$\operatorname{tgy} = \pm 1/\sqrt{3}$$

$$y = \pm P/6 + PK$$

$$-P/2 < 2y < P/2$$

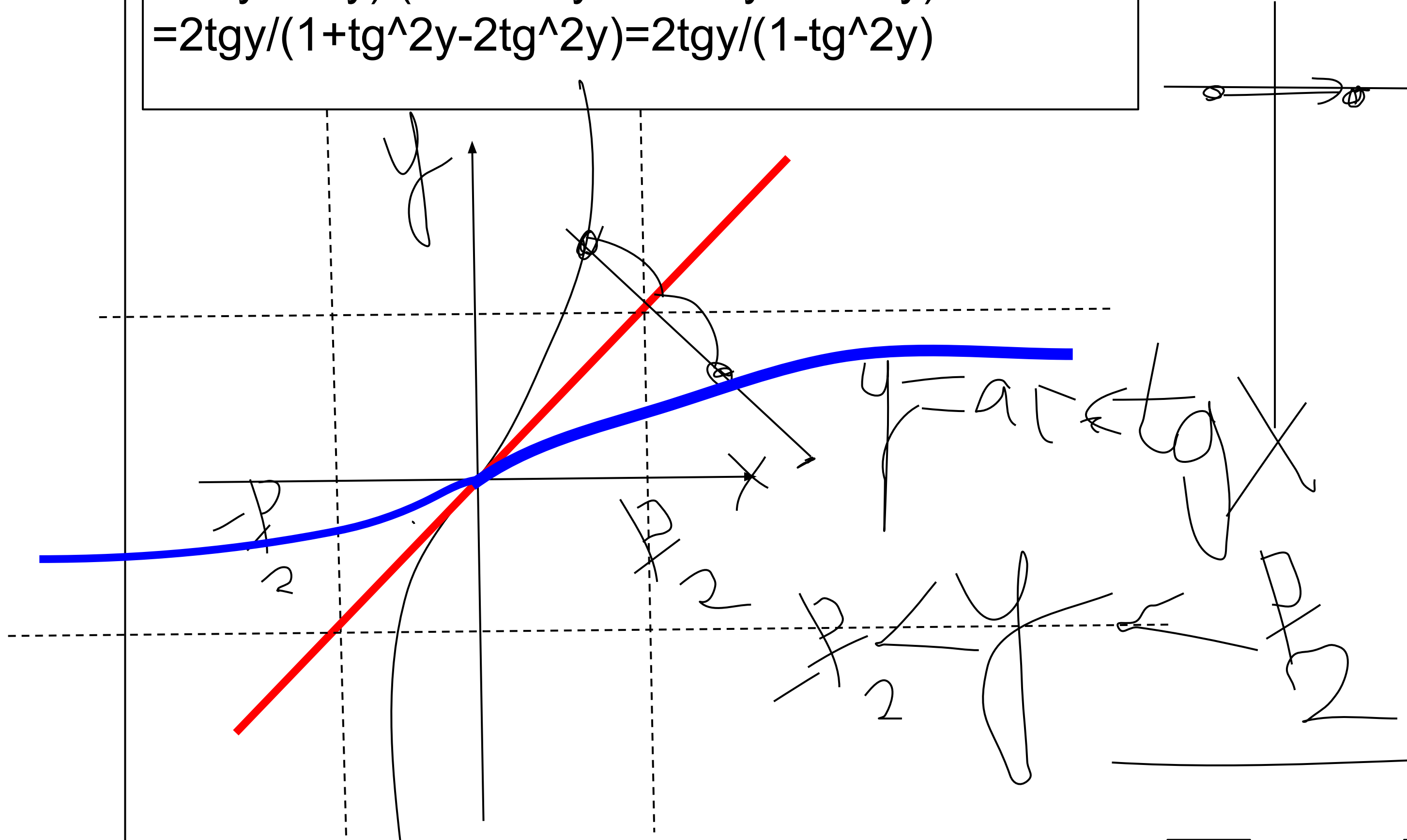
$$-P/4 < y < P/4$$

$$y = \pm P/6$$

$$x = 2 / (1 - \operatorname{tg}^2(P/6)) = 2 / (1 - 1/3) = 2 / (2/3) = 3$$

Ответ: (3; P/6) (3; -P/6) (1/2; 0)

$$\operatorname{tg}(2y) = \sin(2y) / \cos(2y) = 2 \sin y \cos y / (1 - 2 \sin^2 y) = (2 \sin y / \cos y) / (1 / \cos^2 y - 2 \sin^2 y / \cos^2 y) = 2 \operatorname{tgy} / (1 + \operatorname{tg}^2 y - 2 \operatorname{tg}^2 y) = 2 \operatorname{tgy} / (1 - \operatorname{tg}^2 y)$$



2 СПОСОБ

