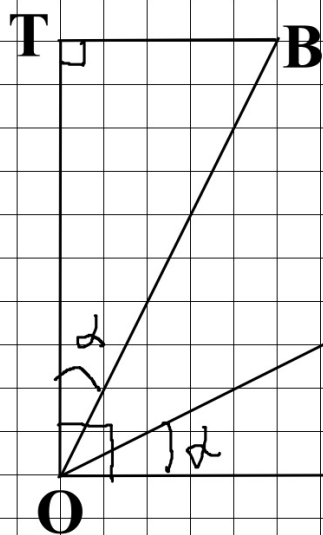


OK и OT вдоль границ клеточек, а также AK и BT. $\triangle OTB$ и $\triangle OKA$ — прямоугольные

$$\operatorname{tg} \angle TOB = TB/TO = \frac{5}{10} \quad \operatorname{tg} \angle AOK = AK/OK = \frac{5}{10}$$



$$\angle AOB = 90^\circ - \angle TOB - \angle AOK,$$

$$\text{так как } \angle TOK = 90^\circ$$

$$\Rightarrow \operatorname{tg} \angle AOB = \operatorname{tg}(90^\circ - \angle TOB - \angle AOK)$$

$$\angle TOB = \angle AOK = \alpha$$

$$\Rightarrow \operatorname{tg} \angle AOB = \operatorname{tg}(90 - 2\alpha) =$$

$$= \operatorname{ctg} 2\alpha = \frac{\cos 2\alpha}{\sin 2\alpha} =$$

$$= \frac{\cos^2 \alpha - \sin^2 \alpha}{2 \sin \alpha \cos \alpha} = \frac{\cos \alpha}{2 \sin \alpha} - \frac{\sin \alpha}{2 \cos \alpha}$$

$$\text{H.о. } \operatorname{tg} \alpha = \frac{5}{10} = \frac{1}{2} \Rightarrow$$

$$\operatorname{tg} \angle AOB = \frac{\cos \alpha}{2 \sin \alpha} - \frac{\sin \alpha}{2 \cos \alpha} = \frac{2}{2} - \frac{1}{2 \cdot 2} = 1 - \frac{1}{4} = \frac{3}{4}$$