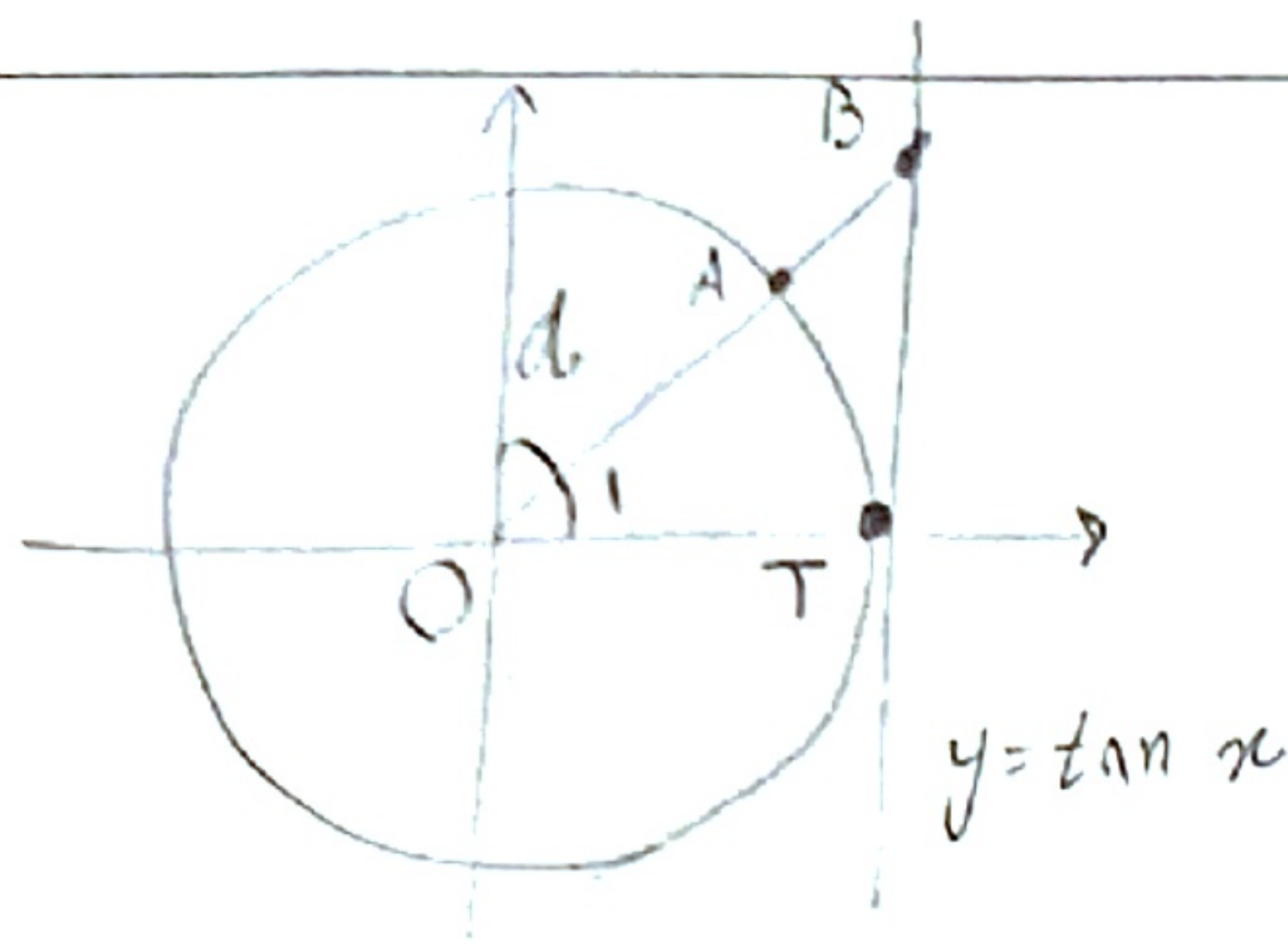


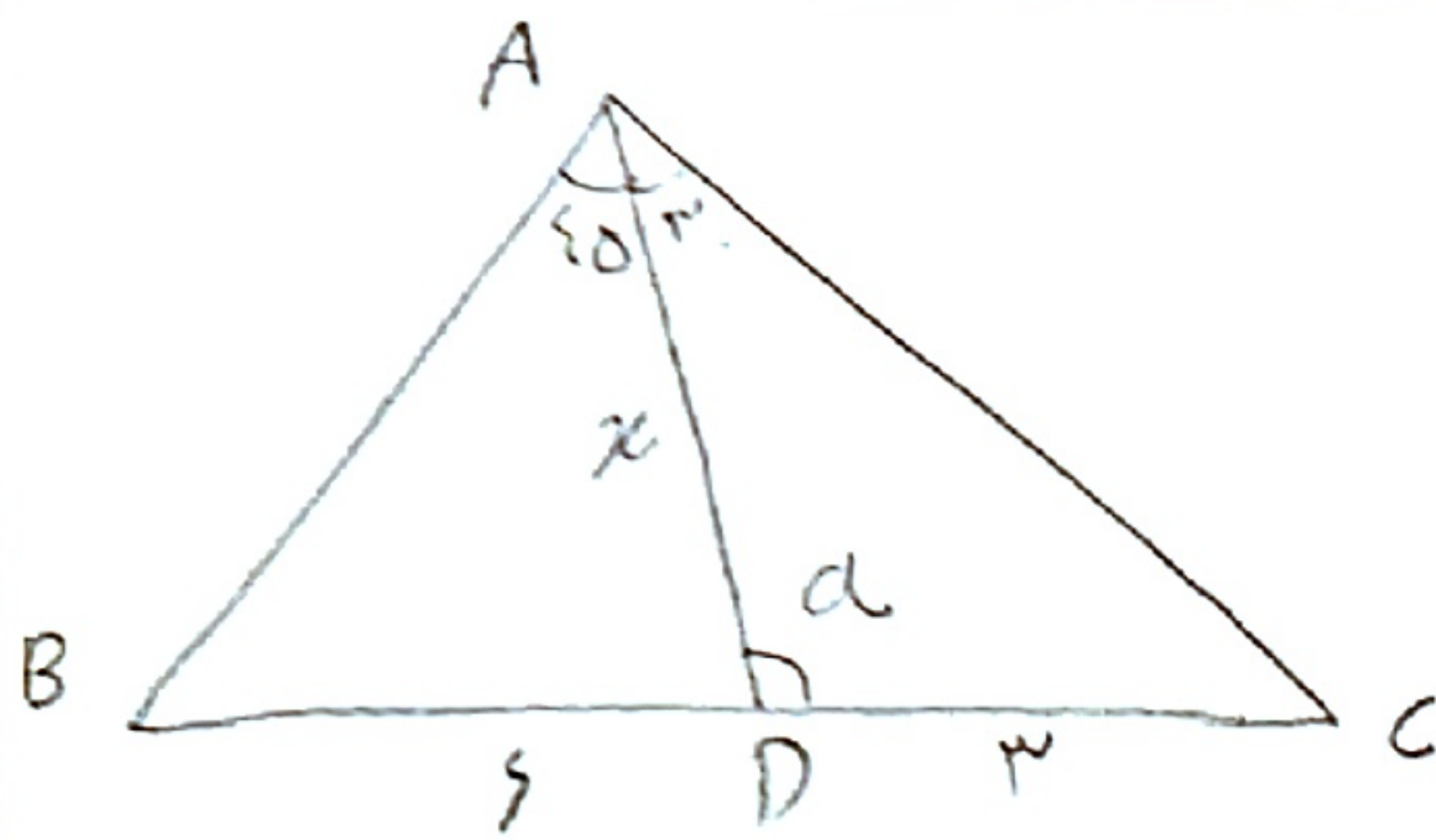


$$OB \times \cos \hat{O}_1 = 1$$

$$OB = \frac{1}{\cos \hat{O}_1} = \frac{1}{\sin \alpha}$$

$$OA = 1 \rightarrow AB = OB - OA = \frac{1}{\sin \alpha} - 1$$

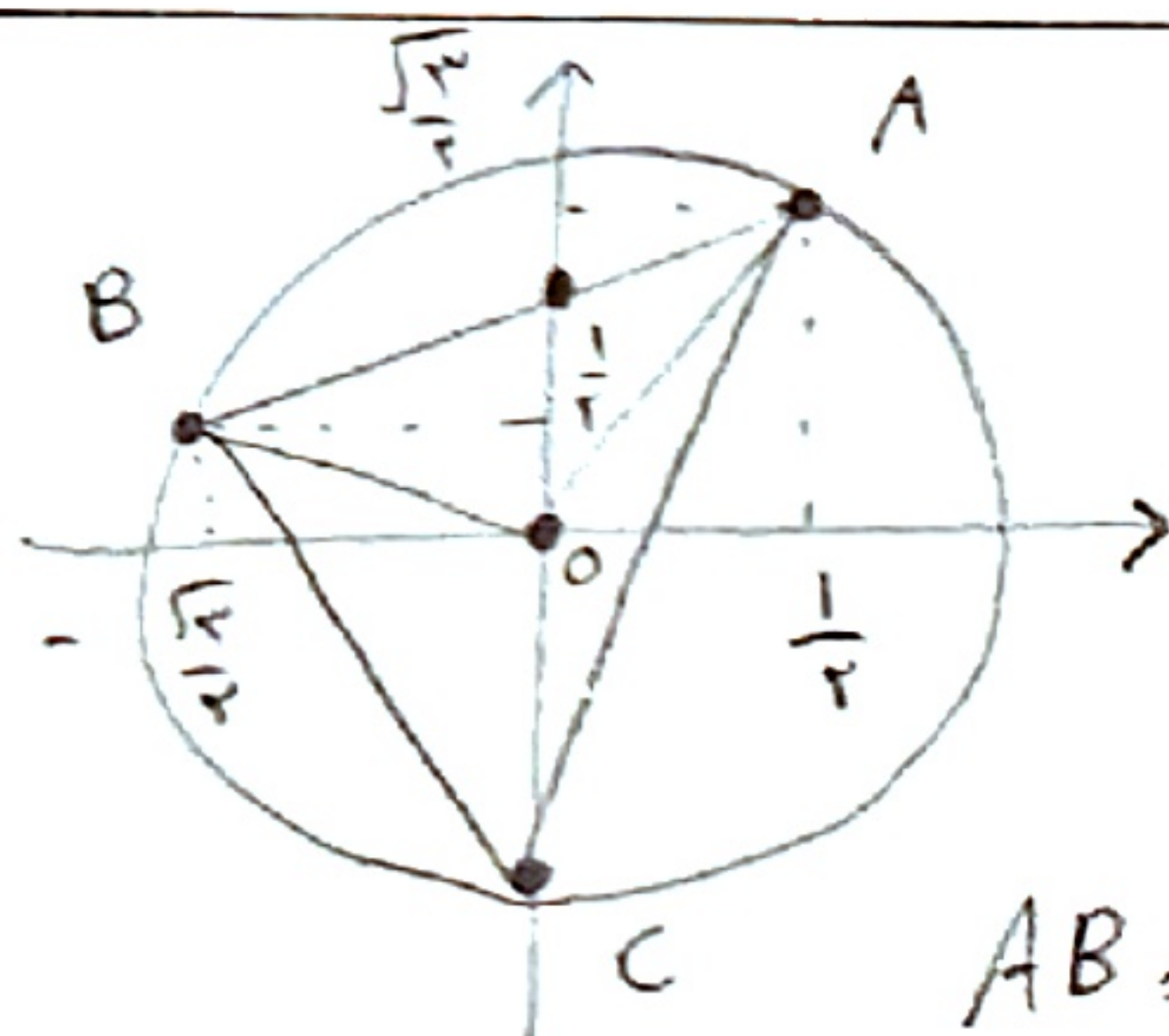
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$$\frac{S_{ABD}}{S_{ACD}} = \gamma = \frac{\frac{1}{2} \sin \alpha \times AB \times x}{\frac{1}{2} \sin \alpha \times AC \times x}$$

$$\frac{AB}{AC} = \frac{\gamma}{\sqrt{2}} = \sqrt{2}$$

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$$\begin{pmatrix} \frac{1}{4}, \frac{\sqrt{3}}{4} \\ -\frac{\sqrt{3}}{4}, \frac{1}{4} \\ 0, -1 \\ \frac{1}{4}, \frac{\sqrt{3}}{4} \end{pmatrix}$$

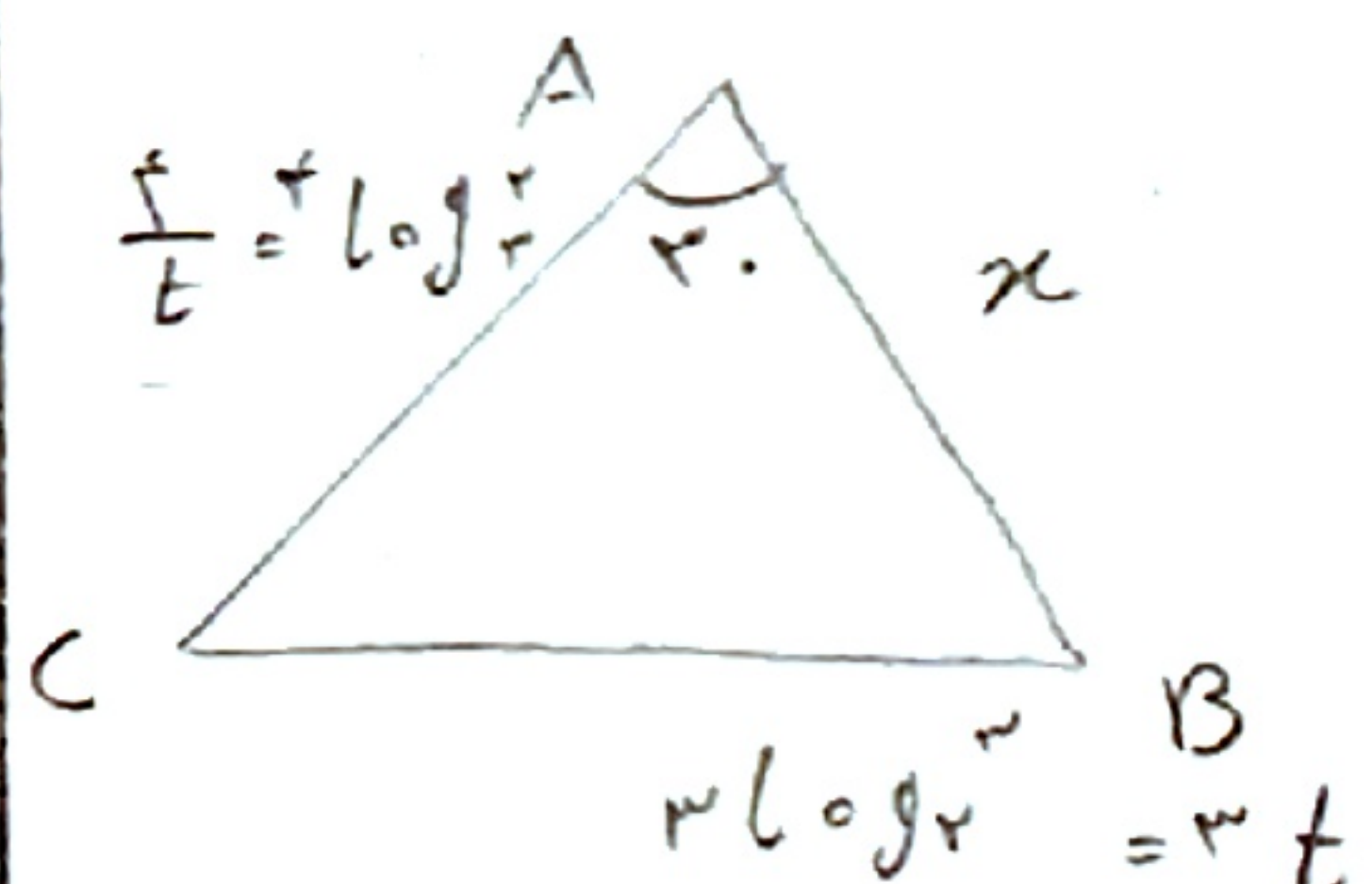
$$\frac{(1 + \frac{\sqrt{3}}{2}) - (-\frac{8}{2})}{2} = \frac{3 + \sqrt{3}}{2}$$

$$= \frac{3 + \sqrt{3}}{2}$$

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$$AB = \sqrt{\left(\frac{\sqrt{3}-1}{2}\right)^2 + \left(\frac{\sqrt{3}+1}{2}\right)^2} = \sqrt{2} \quad BC = \sqrt{\left(1+\frac{1}{2}\right)^2 + \left(\frac{\sqrt{3}}{2}\right)^2} = \sqrt{3}$$

$$AC = \sqrt{\left(1+\frac{\sqrt{3}}{2}\right)^2 + \left(\frac{1}{2}\right)^2} = \sqrt{2+\sqrt{3}} \quad \rho = \sqrt{2} + \sqrt{3} + \sqrt{2+\sqrt{3}}$$



$$BC^2 = x^2 + AC^2 - \sqrt{3} \times AC$$

$$S = \frac{1}{2} \times AC \times x$$

$$x^2 - AC \sqrt{3} x + (AC^2 - BC^2) = 0$$

$$x = AC \sqrt{3} \pm \sqrt{BC^2 - AC^2}$$

$$\rightarrow AC = \frac{t}{2}, BC = \sqrt{t}$$

$$\frac{1}{2} \times x \times AC = \frac{\sqrt{3} \pm \sqrt{9t^2 - 4}}{t^2}$$

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$$\frac{2\sqrt{3} + \sqrt{9(\log \sqrt{t})^2 - 4}}{(\log \sqrt{t})^2}$$

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$$f(x) = (x - \cos a) g(x) + 1$$

$$2x^2 - x^2 - \sin^2(a) (2 \sin^2 a - 1) = (x - \cos a) g(x) + 1$$

$$x = \cos a \rightarrow 2(\cos a)^2 - \cos^2 a - \sin^2(a) (2 \sin^2 a - 1) = 1$$

$$2(\cos^2 a - \sin^2 a) + \sin^2 a - \cos^2 a = 1$$

$$2 \cos 2a - \cos 2a = 1 \rightarrow \cos 2a = 1$$

$$\sin 2a = 0$$

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