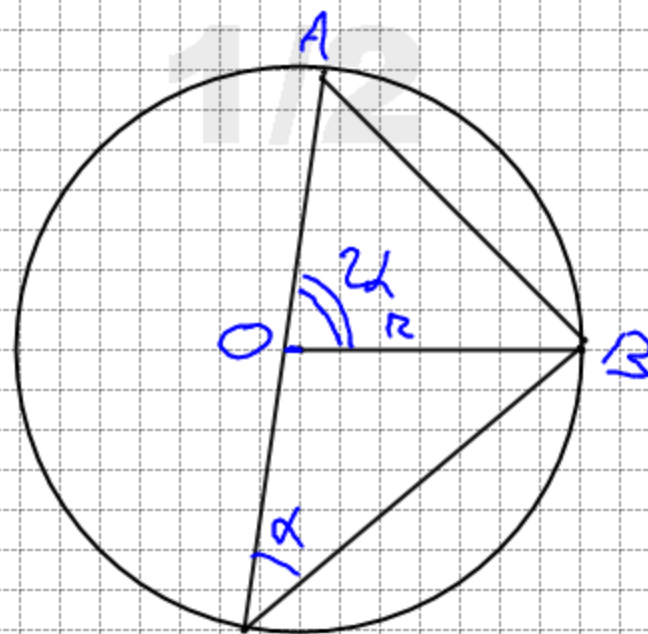


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$$AB = \frac{3}{2}r$$

$$AB = 2r \cdot \text{sen } \alpha$$



$$\text{sen } \alpha = \frac{AB}{2r}$$

$$\text{sen } \alpha = \frac{3}{2}r \cdot \frac{1}{2r}$$

$$\text{sen } \alpha = \frac{3}{4}$$

$$\cos \alpha = \pm \sqrt{1 - \text{sen}^2 \alpha} = \pm \sqrt{1 - \frac{9}{16}} = \pm \sqrt{\frac{7}{16}} = \pm \frac{\sqrt{7}}{4}$$

sen 2\alpha e cos 2\alpha

$$\text{sen } 2\alpha = 2 \text{sen } \alpha \cos \alpha \rightarrow 2 \cdot \frac{3}{4} \cdot \frac{\sqrt{7}}{4} \rightarrow \frac{3\sqrt{7}}{8}$$

$$\cos 2\alpha = \cos^2 \alpha - \text{sen}^2 \alpha \rightarrow \frac{7}{16} - \frac{9}{16} \rightarrow \frac{2}{16} = \frac{1}{8}$$

