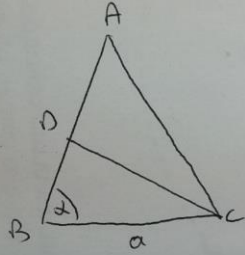


2.66
6



plan pólka ni pólka
 $\frac{AB}{\sin \alpha} = \frac{BC}{\sin \angle A}$: $\triangle ABC$

$$\frac{AB}{\sin \alpha} = \frac{a}{\sin(180-2\alpha)}$$

$$AB = \frac{a \sin \alpha}{\sin 2\alpha} = \frac{a \sin \alpha}{2 \sin \alpha \cos \alpha} = \frac{a}{2 \cos \alpha}$$

$$BD = \frac{1}{2} AB = \frac{a}{4 \cos \alpha} \quad \text{pól}$$

$$DC^2 = BD^2 + BC^2 - 2BD \cdot BC \cos \alpha \quad : \triangle BDC$$

$$DC = \sqrt{\frac{a^2}{16 \cos^2 \alpha} + a^2 - \frac{a^2}{2}} = \frac{a}{4 \cos \alpha} \sqrt{1 + 16 \cos^2 \alpha - 8 \cos^2 \alpha}$$

$$= \frac{a}{4 \cos \alpha} \sqrt{1 + 8 \cos^2 \alpha} = \frac{a}{4} \sqrt{\frac{1}{\cos^2 \alpha} + 8} = \frac{a}{4} \sqrt{1 + \tan^2 \alpha + 8}$$

$$= \frac{a}{4} \sqrt{9 + \tan^2 \alpha}$$