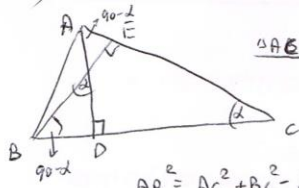


2.8
6



$\triangle AED: \frac{AD}{AE} = \sin \alpha \rightarrow \boxed{AC = \frac{a}{\sin \alpha}}$

(L)

$\triangle BEC: \frac{BE}{BC} = \sin \alpha \rightarrow \boxed{BC = \frac{b}{\sin \alpha}}$

$AB^2 = AC^2 + BC^2 - 2AC \cdot BC \cdot \cos \alpha$: proyeksi pada BC α'

$AB = \sqrt{\frac{a^2}{\sin^2 \alpha} + \frac{b^2}{\sin^2 \alpha} - \frac{2ab}{\sin^2 \alpha} \cos \alpha} = \frac{1}{\sin \alpha} \sqrt{a^2 + b^2 - 2ab \cos \alpha}$

$S = \frac{AD \cdot BC}{2} = \frac{2ab}{\sqrt{3}} = rP$

$AB = \frac{2}{\sqrt{3}} \sqrt{a^2 + b^2 - ab}$ $BC = \frac{2b}{\sqrt{3}}$ $AC = \frac{2a}{\sqrt{3}}$ $\alpha = 60^\circ$ (P)

$r = \frac{2ab}{\sqrt{3}P} = \frac{2ab}{\sqrt{3} \cdot \frac{2}{\sqrt{3}} \left(\frac{1}{\sqrt{3}} \sqrt{a^2 + b^2 - ab} + \frac{2}{\sqrt{3}} \frac{ab}{\sqrt{3}} \right)} = \frac{2ab}{\sqrt{3} \cdot \frac{2}{\sqrt{3}} (\sqrt{a^2 + b^2 - ab} + b + a)} = \frac{ab}{a + b + \sqrt{a^2 + b^2 - ab}}$