

Trigo Find ($\alpha+\beta$)

Given:

$$\operatorname{tg}\alpha = \frac{1}{2}$$

$$\operatorname{tg}\beta = \frac{1}{3}$$

Calculate ($\alpha+\beta$) = ?

$$\operatorname{tg}(\alpha+\beta) = \frac{\operatorname{tg}\alpha + \operatorname{tg}\beta}{1 - \operatorname{tg}\alpha \cdot \operatorname{tg}\beta}$$

$$\operatorname{tg}(\alpha+\beta) = \frac{\frac{1}{2} + \frac{1}{3}}{1 - \frac{1}{6}} = \frac{\frac{3+2}{6}}{\frac{6-1}{6}} = \frac{5}{5} = 1$$

$$\operatorname{tg}(\alpha+\beta) = 1$$

$$\alpha+\beta = 45^\circ$$

The area of triangle ABC

$$A = \frac{(3+2) \cdot 6}{2} = 5 \cdot 3 = 15$$

