

1. Sprawdź tożsamość  $\text{ctg}^2 \alpha \cdot \sin \alpha = 1/\sin \alpha = \text{cosec} \alpha$

$$\text{ctg}^2 \alpha \cdot \sin \alpha =$$

$$= \frac{\cos^2 \alpha}{\sin^2 \alpha} \cdot \sin \alpha =$$

$$= \frac{\cos^2 \alpha}{\sin \alpha \cdot \sin \alpha} \cdot \cancel{\sin \alpha} = \frac{\cos^2 \alpha}{\sin \alpha} =$$

$$= \frac{1 - \sin^2 \alpha}{\sin \alpha} = \frac{1}{\sin \alpha} - \frac{\cancel{\sin^2 \alpha}}{\cancel{\sin \alpha}} =$$

← stracamy kwadrat z  $\sin \alpha$

$$= \frac{1}{\sin \alpha} - \sin \alpha$$

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