Answer on Question #81508 – Math – Trigonometry

Question

Complete the identity?

sin(a-b)/cosacosb=

$$\frac{\sin(a-b)}{\cos a \cos b} =$$

Solution

$$\frac{\sin(a-b)}{\cos a \cos b} = \frac{\sin a \cdot \cos b - \cos a \cdot \sin b}{\cos a \cdot \cos b} = \frac{\sin a \cdot \cos b}{\cos a \cdot \cos b} - \frac{\cos a \cdot \sin b}{\cos a \cdot \cos b} =$$

$$= \frac{\sin a}{\cos a} - \frac{\sin b}{\cos b} = \tan a - \tan b$$

Answer: $\frac{\sin(a-b)}{\cos a \cos b} = \tan a - \tan b.$