Establish the identity[1]

$$\frac{\cos(\alpha-\beta)}{\sin(\alpha)\cos(\beta)} = \cot(\alpha)+\tan(\beta)$$

Since this identity includes the expression $\cos(\alpha-\beta)$, we'll probably need to recall

$$\cos(\alpha-\beta) = \cos(\alpha)\cos(\beta)+\sin(\alpha)\sin(\beta)$$

Let's start with the left side and try to transform it into the right side.

$$\begin{aligned}
\frac{\cos(\alpha-\beta)}{\sin(\alpha)\cos(\beta)} &= \frac{\cos(\alpha)\cos(\beta)+\sin(\alpha)\sin(\beta)}{\sin(\alpha)\cos(\beta)} \\
&= \frac{\cos(\alpha)\cos(\beta)}{\sin(\alpha)\cos(\beta)} + \frac{\sin(\alpha)\sin(\beta)}{\sin(\alpha)\cos(\beta)} \\
&= \frac{\cos(\alpha)}{\sin(\alpha)} + \frac{\sin(\beta)}{\cos(\beta)} \\
&= \cot(\alpha)+\tan(\beta)
\end{aligned}$$

Now let's try to transform the right side into the left side.

$$\begin{aligned}
\cot(\alpha)+\tan(\beta) &= \frac{\cos(\alpha)}{\sin(\alpha)} + \frac{\sin(\beta)}{\cos(\beta)} \\
&= \frac{\cos(\alpha)}{\sin(\alpha)}\cdot\frac{\cos(\beta)}{\cos(\beta)} + \frac{\sin(\beta)}{\cos(\beta)}\cdot\frac{\sin(\alpha)}{\sin(\alpha)} \\
&= \frac{\cos(\alpha)\cos(\beta)+\sin(\alpha)\sin(\beta)}{\sin(\alpha)\cos(\beta)} \\
&= \frac{\cos(\alpha-\beta)}{\sin(\alpha)\cos(\beta)}
\end{aligned}$$

[1] Sullivan, *Precalculus: Enhanced with Graphing Utilities*, p. 486, #22.