Name_____Solutions_____ Trigonometry, Quiz 19

Verify the following identity: $\sec(x) - \tan(x)\sin(x) = \cos(x)$

$$\begin{aligned}\sec(x) - \tan(x)\sin(x) &= \frac{1}{\cos(x)} - \frac{\sin(x)}{\cos(x)} \cdot \sin(x) \\ &= \frac{1}{\cos(x)} - \frac{\sin^2(x)}{\cos(x)} \\ &= \frac{1 - \sin^2(x)}{\cos(x)} \\ &= \frac{\cos^2(x)}{\cos(x)} \\ &= \cos(x)\end{aligned}$$