1368. Dokazati sledeći identitet: $\frac{\sin x+\cos x}{\sin x-\cos x}-\frac{1+2\cos^2 x}{\cos^2 x\cdot(tg^2 x-1)}=\frac{2}{1+tgx}$

$$\frac{\sin x+\cos x}{\sin x-\cos x}-\frac{1+2\cos^2 x}{\cos^2 x\cdot(tg^2 x-1)}=\frac{2}{1+tgx}$$

$$\frac{\sin x+\cos x}{\sin x-\cos x}-\frac{1+2\cos^2 x}{\cos^2 x\cdot\left(\frac{\sin^2 x}{\cos^2 x}-1\right)}=\frac{2}{1+tgx}$$

$$\frac{\sin x+\cos x}{\sin x-\cos x}-\frac{1+2\cos^2 x}{\sin^2 x-\cos^2 x}=\frac{2}{1+tgx}$$

$$\frac{(\sin x+\cos x)^2-(1+2\cos^2 x)}{\sin^2 x-\cos^2 x}=\frac{2}{1+tgx}$$

$$\frac{\sin^2 x+2\sin x\cos x+\cos^2 x-1-2\cos^2 x}{\sin^2 x-\cos^2 x}=\frac{2}{1+tgx}$$

$$\frac{2\sin x\cos x-2\cos^2 x}{\sin^2 x-\cos^2 x}=\frac{2}{1+tgx}$$

$$\frac{2\cos x(\sin x-\cos x)}{\sin^2 x-\cos^2 x}=\frac{2}{1+tgx}$$

$$\frac{2\cos x}{\sin x+\cos x}=\frac{2}{1+tgx}$$

$$\frac{2}{\frac{\sin x+\cos x}{\cos x}}=\frac{2}{1+tgx}$$

$$\frac{2}{tgx+1}=\frac{2}{1+tgx}$$