L4 – 4.5 Prove Trig Identities
MHF4U

Using your sheet of all identities learned this unit, prove each of the following:

Example 1: Prove $\frac{\sin(2x)}{1+\cos(2x)} = \tan x$

LS	**RS**

Example 2: Prove $\cos\left(\frac{\pi}{2} + x\right) = -\sin x$

LS	**RS**

Example 3: Prove $\csc(2x) = \frac{\csc x}{2\cos x}$

LS	RS

Example 4: Prove $\cos x = \frac{1}{\cos x} - \sin x \tan x$

LS	RS

Example 5: Prove $\tan(2x) - 2\tan(2x)\sin^2 x = \sin 2x$

LS | **RS**

Example 6: Prove $\frac{\cos(x-y)}{\cos(x+y)} = \frac{1+\tan x \tan y}{1-\tan x \tan y}$

LS | **RS**