

## MCR3U – Unit 4: Trig Ratios

**TRIG IDENTITIES PRACTICE**

Prove the following Trigonometric Identities (on a separate piece of paper)

a)  $\frac{\sin(\theta)}{\cos(\theta) \cdot \tan(\theta)} = 1$

b)  $\sin(x) \cdot \tan(x) + \frac{1}{\cos(x)} = \frac{\sin^2(x)+1}{\cos(x)}$

c)  $\frac{\sin^2(x)}{\tan^2(x)} = 1 - \sin^2(x)$

d)  $\sin^2(\theta) = \frac{\tan^2(\theta)}{1+\tan^2(\theta)}$

e)  $\sin(A) + \frac{\cos(A)}{\tan(A)} = \frac{1}{\cos(A) \cdot \tan(A)}$

f)  $\tan(\theta) + \cot(\theta) = \csc(\theta) \cdot \sec(\theta)$

g)  $(\cos(\phi) - \sin(\phi))^2 = 1 - 2 \sin(\phi) \cdot \cos(\phi)$

h)  $\sin^2(B) = \cos(B) [\sec(B) - \cos(B)]$

i)  $\tan(x) + \frac{\cos(x)}{1+\sin(x)} = \frac{1}{\cos(x)}$