

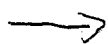
## Quiz 10

This quiz is graded out of 10 marks. No books, calculators, notes or cell phones are allowed. You must show all your work, the correct answer is worth 1 mark the remaining marks are given for the work. If you need more space for your answer use the back of the page.

Question 1. Prove (Verify) the following identities:

a. (4 marks) pg. 198 #6

$$\frac{\sin x}{\csc x} + \frac{\cos x}{\sec x} = 1$$



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

b. (6 marks) pg. 198 #18

$$\frac{1 - \cos 2x}{\sin 2x} = \tan x$$



$$\sin^2 x + \cos^2 x = 1$$

$$1 = 1$$

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

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

$$\frac{2\sin^2 x}{2\sin x \cos x} = \tan x$$

$$\frac{\sin x}{\cos x} = \tan x$$

$$\tan x = \tan x$$