**Trigonometry 1**

**1.** Prove that

 Consider:

 Rearrange, we get .

**2.** Given : , find in degrees.

 .

**3.** By completing the square, find the greatest and least values, as varies, of .

 When ,

 The maximum value occurs when ,

**4.** Solve where

 The general solution is , where n is an integer.

 Since , the solution within the range is or .

**5.** Proof:

**6.** Solve the equation for .

 Put , then ,

 (1) becomes

 The general solution

 , where n is an integer.

 Since ,

 Or

**7.** If , show that .

**8.** Solve for general solution in terms of degrees.

 , where n is an integer.

 , where n is an integer.

**9.** Prove

 R.H.S. = = L.H.S.

**Yue Kwok Choy**

**2/1/2019**