**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.

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