Problem-1-Function-1

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1 Introduction

Arcos(x) generally define as the inverse of the trigonometric Cosine function. The arc- prefix depicts the inverse part of the function. In general all the trigonometric functions when measured in radians is ofΘ radian.However the inverse function lies under the radian of $(r\Theta)$. Cosine Function in general is the function for finding the value at an angle Θ. Whereas the Inverse function is used to find the value of an unknown length of right angle.

2 Characteristics of Arcos(x):

Originally the arcos function was simply written with the susbscipt '-1' but that was confused with the exponent. So to avoid this confusion arcos prefix was used and function was defined as followed:

$$\text{If x=cos y}$$

Then the inverse function is written as :

$$y= \cos x^{-1}$$

Which can also be written as : $\arccos x = \cos x^{-1} = y$.

3 Domain and Range Of Inverse Function:

The domain of the function is restricted to [-1,1]. Due to the mapping in case of Arccos function being many-to-one inverse function would not satisfy any one range. Where as the arccos function defines in the range of 0 to π.

4 References:

1. Mathwords.com. (2019). Mathwords: Inverse Cosine. [online] Available at: https://www.mathwords.com/c/cosine_inverse.htm[Accessed12Jul.2019].