

Answer on Question#54358 - <Math> - < Algebra >

Write true or false and justify your answer:

1) the function  $f : R \rightarrow R$  defined by  $f(x) = \cos x$  is one to one

**Solution.** Since there exist  $x = 2\pi \in R$  and  $y = 0 \in R$  such that  $x \neq y$ , but  $f(x) = \cos 2\pi = 1 = \cos 0 = f(y)$ , then we obtain that  $f(x) = \cos x$  isn't an one to one function. Thus the answer is FALSE

**Answer.** FALSE

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