



Math for the people, by the people.

Peano's theorem

Canonical name	PeanosTheorem
Date of creation	2013-03-22 15:20:21
Last modified on	2013-03-22 15:20:21
Owner	Daume (40)
Last modified by	Daume (40)
Numerical id	6
Author	Daume (40)
Entry type	Theorem
Classification	msc 34A12

If

$$\frac{dy}{dx} = f(x, y) \tag{1}$$

is an ordinary differential equation where $f(x, y)$ is continuous on a planar domain E , then (??) has at least one integral curve for each (x_0, y_0) of E . [?, ?]

References

[KF] KOLMOGOROV, A.N. & FOMIN, S.V., *Introductory Real Analysis*,
Translated & Edited by Richard A. Silverman, Dover Publications, Inc.
New York, 1970.

[T] TESCHL, GERALD, <http://www.mat.univie.ac.at/~gerald/ftp/book-ode/index.html>ht
ode/index.html, 2004.