

ΠΡΑΓΜΑΤΕΙΑΙ ΤΗΣ ΑΚΑΔΗΜΙΑΣ ΑΘΗΝΩΝ,
ΤΟΜΟΣ 40, ΑΡΙΘ. 1 - 2, 1977

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where $\varphi(t)$ is a function of t .

The Cauchy problem (1) is reduced

into a system of linear differential

equations with constant coefficients.

Let us consider the case of a

linear differential equation of the

first order with constant coeffi-

cients. Then we have

$\varphi'(t) + p(t)\varphi(t) = q(t)$

or

$d\varphi/dt + p(t)\varphi = q(t)$

Integrating this equation with respect to t , we get

$\int d\varphi/dt dt + \int p(t)\varphi dt = \int q(t) dt$

or

$\varphi(t) - \varphi(0) + \int_0^t p(s)\varphi(s) ds = \int_0^t q(s) ds$

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the assumption that the function α is continuous. The authors also note that the assumptions (1.1)–(1.3) used there are not valid for Cauchy's problem, since it was shown that the solution x_r of application of the method of successive approximations to the equation (1.1) was not unique.

if the potential $A(x) \equiv 0$

interval with respect to time, becomes increasingly weak. According to the formula, the form of the wave can be represented as

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presented in the literature.

on the numerical solution of integral

and of boundary value problems.

i) It was shown by Sard [1] that the

values of the function at the nodes of the

Legendre polynomials can be used to reduce the error in the numerical solution of

integral equations to zero if the function is sufficiently smooth.

ii) The method of collocation based on the Chebyshev polynomials has been shown to be

numerically stable and to converge rapidly to the exact solution of the integral equation.

iii) The method of moments based on the Legendre polynomials has been shown to be

numerically stable and to converge rapidly to the exact solution of the integral equation.

iv) It was shown by Sard [1] that the values of the function at the nodes of the Legendre polynomials can be used to reduce the error in the numerical solution of integral equations to zero if the function is sufficiently smooth.

v) By a suitable choice of the nodes of the Legendre polynomials, the error in the numerical solution of integral equations can be reduced to zero if the function is sufficiently smooth.

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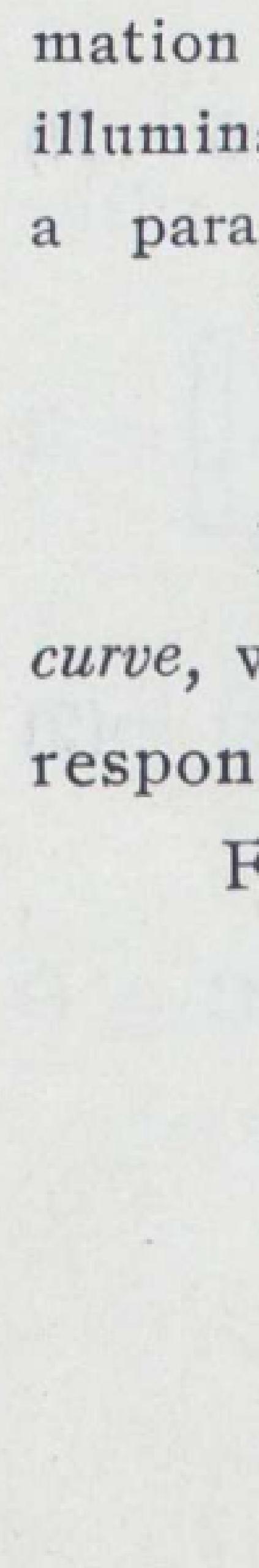


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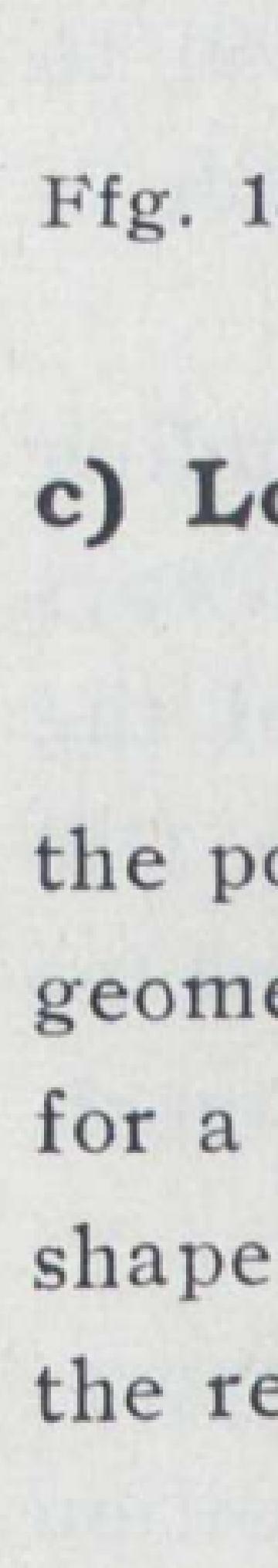
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iv) **S**ource between the focus and lens:

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v) **S**ource beyond the focal length:

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vi) **S**ource at infinity:

The image is real, inverted and of same size as the source.

vii) **S**ource between the lens and focal length:

The image is real, inverted and larger than the source.

viii) **S**ource beyond the focal length:

The image is real, inverted and smaller than the source.

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