

THE RELATION BETWEEN THE DERIVATIVE OF A FUNCTION  
AND THE TANGENT LINE TO THE CURVE

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006976

Thesis

Submitted in partial fulfillment of the requirements for the  
Degree of Master of Science

In

The Chulalongkorn University Graduate School

Department of Mathematics

April, 1965

(B.E. 2508)

Accepted by the Graduate School, Chulalongkorn  
University in partial fulfillment of the requirements  
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Thesis Title THE RELATION BETWEEN THE DERIVATIVE OF A FUNCTION  
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ABSTRACT

The concept of "tangency" is one of the most important concepts in mathematics. It has been generally defined in terms of the "limit". Yet it is not the only way to do so. Another possible way in defining "tangency" is by means of mathematical analysis and the concepts of maximum and minimum. This approach is somehow more valid and far more reaching to the beginning students of pure mathematics than the regular method. This study can be made more advantageous through the use of the lemma II.5 which is extended to be valid even for the infinite polynomials, which converge absolutely for all values of the indeterminate in some interval. As far as the extended lemma holds, the theory is automatically extended to the infinite polynomials, which represent most general transcendental functions.

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