

**THREE-DIMENSIONAL
HOMOGENEOUS HEAT EQUATION
IN RECTANGULAR COORDINATES**

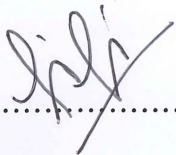
NORAFIFI NAJWA BINTI WIRA

**Thesis Submitted in Fulfillment of the Requirement for
Bachelor of Science (Hons.) Computational Mathematics in the
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DECLARATION BY CANDIDATE

I certify that this report and the project to which it refers is the product of my own work and that any idea or quotation from the work of other people, published or otherwise are fully acknowledged in accordance with the standard referring practices of the discipline.



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NORAFIFI NAJWA BINTI WIRA

2014831294

JULY 23,2017

ABSTRACT

Heat equation is a parabolic partial differential equation that describes the variation of temperature with respect to time over a given region. Generally, heat transfer through a medium in three-dimensional. This project deals with the derivation of three-dimensional homogeneous heat equation in rectangular coordinates with different boundary conditions. In addition, Fourier series is also used to find the coefficients in order to obtain solution of heat equation. Therefore, the solution of homogeneous heat equation in solid cuboid can be obtained using the separation of variables method.

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