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AN APPLICATION OF HOMOTOPY ANALYSIS METHOD TO THE MODEL OF HEAT TRANSFER AND CONVECTIVE COOLING

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Abstract:

This paper discusses analytical temperature distribution and the heat transfer from the rods having variable thermal conductivity. Homotopy analysis method (HAM) has been used to find the analytical solution for three different cases with the freedom of choosing auxiliary parameter, auxiliary function and the linear operator. Three cases of heat transfer were considered for the presented paper. The results for these were found to agree with the analysis by HAM which validated the proposed method.

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