

# CONSTRUCTION OF GRADE CLASSES WITH EMPHISIS IN MINIMIZATION OF TWINNED CLASSES AND WINDOWS

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## ABSTRACT

The timetabling problem is, as best as possible, allocate teachers at their respective classes, to meet with their students, so that it complies with the amount of weekly lessons of discipline. Many basic education institutions still do this work manually, since commercial softwares to solve this problem are considered high cost, especially for public schools, and softwares present on the web sometimes do not give good solutions. Thus, is demanded a lot of time in the pursuit of meeting the preference of requests from teachers, maybe creating windows, twinned classes or isolated classes. In this context, this research seeks to resolve problems such as those mentioned using a metaheuristics and compare the quality of the solution obtained with the use of exact method since metaheuristics admit possible to determine a feasible solution even not getting the optimal solution to the problem. Moreover, the mathematical modeling problem will be penalized the solutions having the undesirable characteristics, increasing the likelihood that the model itself select the solutions with better performance.