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OPTIMIZATION METHODS AND THE INFORMATIONAL TECHNOLOGIES IN MODELING OF BUSINESS

The paper discusses the mathematical models of minimization of waste in cutting wood and route of delivery of finished products to consumers (traveling salesman problem).

The analytical approach to the decision of the task of the direct-sales representative is considered on the basis of a method of branches and borders. The special supplement of spreadsheets Excel (all existing versions) with application of programming on VBA and calculator, built – in the table, Solver is offered for tasks of high dimension.

It was offered to use mathematical model of integer programming by the purpose of minimization of waste in tasks opening wood. The simplex method in a combination to its numerical realization in a package of the applied programs MathCad 14.0 was used as the task has a plenty variable. Multialternative accounts of optimization are connected only with the changing of initial given restrictions in mathematical model. All intermediate results are corrected automatically.

The possibility of lower the waste of valuable wood if to use the appropriate types of preparations and optimum variants them their sawing was shown on concrete examples.

The carried out researches have the practical orientation. The offered approaches can be used for the modeling of work of enterprises by increase of its efficiency and optimum formation of the industrial orders.