

# Development of an Algorithm Improving Label Arrangements in Offset Printing

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## Abstract

One of the most classic problems in the manufacturing industry is inventory processing. There is a way to effectively reduce inventory by changing the array of the pieces on the printing plates in the offset printing. It is setting an upper limit of acceptable for each plate, and carrying out complete enumeration. This method dramatically reduces the operating time of the algorithm. The advantage of this method is that there is only change the arrangement of the pieces on the plates.

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## 1. Introduction

A combination with repetition is the number of cases, where  $k$  elements are selected from among different  $n$  elements allowing repetition [1]. It is indicated

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