Abstract

The relation between balanced arrays and two other combinatorial structures, namely, orthogonal arrays and transitive arrays is pointed out. We provide three new and simple but rather stringent methods of constructing balanced arrays of any strength provided that the balanced arrays exist. A theorem that enables one to generate a balanced array from several known balanced arrays has been proved. The existence results of some types of balanced arrays based on the existence of some types of Hadamard matrices have also been proved.