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Classification of three-word indicator functions of two-level factorial designs

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Abstract Indicator functions have been in the literature for several years, and yet only a few of their properties have been examined. In this paper, we study some properties of indicator functions of two-level fractional factorial designs. For example, we show that there is no indicator function with only two words, and also classify all indicator functions with only three words. The results imply that there is no valuable non-regular design with only three or less words in its indicator function.

Keywords Fractional factorial design · Indicator function · Word · Non-regular design · Foldover design ·