

Werk

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$$v = {}^3mC_m, \quad b = (3m)! (m!)^{-3} (3!)^{-1},$$

$$r = (2m)! (m!)^{-2} (2!)^{-1}, \quad k = 3, \quad \lambda_i = 0, \quad i = 1, 2, \dots, m-1; \quad \lambda_m = 1,$$

$$n_i = {}^{2m}C_i {}^mC_i, \quad i = 1, 2, \dots, m;$$

$$p_{jk}^i = \sum_{\omega=0}^{m-i} \binom{m-i}{\omega} \binom{i}{m-k-\omega} \binom{i}{m-j-\omega} \binom{2m-i}{j+k-m+\omega},$$

$$i, j, k = 1, 2, \dots, m.$$

Since no two treatments having i ($i = 1, 2, \dots, m-1$) integers in common lie on a block, therefore

$$\lambda_i = 0, \quad i = 1, 2, \dots, m-1,$$

and, $\lambda_m = 1$.

The def. of m -associate triangular association scheme is given in [3].

3. GENERALIZED QUADRANGLE OF ORDER 2

For $m = 2$, the triangle free (15_3) configuration (Section 1) is a generalized quadrangle [4] of order 2.

The 15 points of the configuration are represented by (ij) same as (ji) ; $i, j = 1, 2, \dots, 6$; $i \neq j$. The 15 lines are

$$\begin{array}{ccccc} (12 \ 34 \ 56) & (13 \ 24 \ 56) & (14 \ 23 \ 56) & (15 \ 23 \ 46) & (16 \ 23 \ 45) \\ (12 \ 35 \ 46) & (13 \ 25 \ 46) & (14 \ 25 \ 36) & (15 \ 24 \ 36) & (16 \ 24 \ 35) \\ (12 \ 36 \ 45) & (13 \ 26 \ 45) & (14 \ 26 \ 35) & (15 \ 26 \ 34) & (16 \ 25 \ 34) \end{array}$$

On a line, say, $(12 \ 34 \ 56)$ lies three points 12, 34, 56. For $m \geq 3$, the configuration can not be interpreted as a generalized quadrangle.

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References

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