

This file contains a description of **type III(b) primitive groups**¹ action on symmetric designs with up to 2500 points.

There are two such designs, both with 1296 points: D1296[1] and D1296[2].

Design records are given as entries of the list "D1296" in the file "SymDes1296".

The action of primitive groups on D1296[i], i=1,2 we present by a 3-row table, each column of which is appointed to one group acting on the design.

The first row reads identification numbers of the groups in the GAP-library of primitive groups; group rank is in the third row.

The full automorphism group occupies the last column of the table.

All groups acting on each design belong to a single cohort.

(1296, 630, 306) : D1296[1]; Menon design with $t = 18$

27	36	37	47
$PSU_3(3)^2 .2$	$PSU_3(3)^2 .4$	$PSU_3(3)^2 .2^2$	$PSU_3(3)^2 .D_8$
10	6	7	6

(1296, 630, 306) : D1296[2]; Menon design with $t = 18$

69	74	75	77
$PSp_4(3)^2 .2$	$PSp_4(3)^2 .4$	$PSp_4(3)^2 .2^2$	$PSp_4(3)^2 .D_8$
6	6	6	6

¹In the sense of: M.W. Liebeck, C.E. Praeger and J. Saxl, *On the O'Nan-Scott theorem for finite primitive permutation groups*, J. Austral. Math. Soc. (Series A) **44** (1988), 389-396.