

1. TENSORIAL ASPECTS OF PHYSICAL PROPERTIES

Table 1.10.5.3. The representation matrices for Γ_3

The representation matrices for Γ_3 are the same as for Γ_2 . Correspondences are given as pairs i, j : $\Gamma_3(R_i) = \Gamma_2(R_j)$.

i	j	i	j	i	j	i	j	i	j	i	j
1	1	11	21	21	5	31	42	41	29	51	48
2	14	12	16	22	6	32	45	42	39	52	54
3	23	13	17	23	8	33	36	43	33	53	46
4	15	14	4	24	10	34	27	44	30	54	50
5	25	15	2	25	11	35	26	45	38	55	52
6	24	16	13	26	34	36	28	46	49	56	57
7	19	17	12	27	35	37	31	47	53	57	59
8	20	18	7	28	43	38	40	48	51	58	56
9	18	19	9	29	44	39	37	49	47	59	58
10	22	20	3	30	41	40	32	50	55	60	60

crystallographic groups in 4D and 5D. The two three-dimensional representations have the same matrices. The elements, however, are connected by an outer automorphism. That means that the i th element R_i is represented by $\Gamma_2(R_i)$ in the representation Γ_2 , and by $\Gamma_3(R_i) = \Gamma_2(\varphi R_i)$ in Γ_3 . The element φR_i is another element R_j . The corresponding j for each i is given in Table 1.10.5.3.

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