CHARACTER TABLE FOR D_n POINT GROUP

Character table for D_2 point group

	E	C_2 (z)	C_2 (y)	C_2 (x)	Linear Functions, Rotations	Quadratic
A	1	1	1	1		x^2, y^2, z^2
B_1	1	1	-1	-1	z, R_z	xy
B_2	1	-1	1	-1	y, R_y	xz
B_3	1	-1	-1	1	x, R_x	yz

Character table for D_3 point group

	E	$2C_3$ (z)	$3C'_2$	Linear Functions, Rotations	Quadratic
A_1	1	1	1		x^2+y^2, z^2
A_2	1	1	-1	z, R_z	
E	2	-1	0	(x, y) (R_x, R_y)	(x^2-y^2, xy) (xz, yz)

Character table for D_4 point group

	E	$2C_4$ (z)	C_2 (z)	$2C'_2$	$2C''_2$	Linear functions, Rotations	Quadratic
A_1	1	1	1	1	1		x^2+y^2, z^2
A_2	1	1	1	-1	-1	z, R_z	
B_1	1	-1	1	1	-1		x^2-y^2
B_2	1	-1	1	-1	1		xy
E	2	0	-2	0	0	(x, y) (R_x, R_y)	(xz, yz)

Character table for D_5 point group

	E	$2C_5$ (z)	$2(C_5)^2$	$5C'_2$	Linear Functions, Rotations	Quadratic
A_1	1	1	1	1		x^2+y^2, z^2
A_2	1	1	1	-1	z, R_z	
E_1	2	$2\cos(2\pi/5)$	$2\cos(4\pi/5)$	0	(x, y) (R_x, R_y)	(xz, yz)
E_2	2	$2\cos(4\pi/5)$	$2\cos(2\pi/5)$	0		

Character table for D_6 point group

	E	$2C_6$ (z)	$2C_3$ (z)	C_2 (z)	$3C'_2$	$3C''_2$	Linear Functions, Rotations	Quadratic
A_1	1	1	1	1	1	1		x^2+y^2, z^2
A_2	1	1	1	1	-1	-1	z, R_z	
B_1	1	-1	1	-1	1	-1		
B_2	1	-1	1	-1	-1	1		
E_1	2	1	-1	-2	0	0	(x, y) (R_x, R_y)	(xz, yz)
E_2	2	-1	-1	2	0	0		(x^2-y^2, xy)