CHARACTER TABLES FOR C_n POINT GROUPS

Character table for C_2 point group

	E	C_2	Linear Functions, Rotations	Quadratic
A	1	1	z, R_z	x^2, y^2, z^2, xy
B	1	-1	x, y, R_x, R_y	yz, xz

Character table for C_3 point group

	E	C_3	$(C_3)^2$	Linear Functions, Rotations	Quadratic
A	1	1	1	z, R_z	x^2+y^2, z^2
E	1	e	e^*	x+iy; R_x+iR_y	(x^2-y^2, xy) (yz, xz)
	1	e^*	e	x-iy; R_x-iR_y	

$e = \exp(2\pi i/3)$

Character table for C_4 point group

	E	C_4	C_2	$(C_4)^3$	Linear Functions, Rotations	Quadratic
A	1	1	1	1	z, R_z	x^2+y^2, z^2
B	1	-1	1	-1		x^2-y^2, xy
E	1	i	-1	-i	x+iy; R_x+iR_y	
	1	-i	-1	i	x-iy; R_x-iR_y	(yz, xz)

Character table for C_5 point group

	E	C_5	$(C_5)^2$	$(C_5)^3$	$(C_5)^4$	Linear Functions, Rotations	Quadratic
A	1	1	1	1	1	z, R_z	x^2+y^2, z^2
E_1	1	e	e^2	e^{2*}	e^*	x+iy, R_x+iR_y	
	1	e^*	e^{2*}	e^2	e	x-iy, R_x-iR_y	(yz, xz)
E_2	1	e^2	e^*	e	e^{2*}		
	1	e^{2*}	e	e^*	e^2		(x^2-y^2, xy)

$e = \exp(2\pi i/5)$

Character table for C_6 point group

	E	C_6	C_3	C_2	$(C_3)^2$	$(C_6)^5$	Linear Functions, Rotations	Quadratic
A	1	1	1	1	1	1	z, R_z	x^2+y^2, z^2
B	1	-1	1	-1	1	-1		
E_1	1	e	$-e^*$	-1	-e	e^*	$x+iy$; R_x+iR_y	
	1	e^*	-e	-1	$-e^*$	e	$x-iy$; R_x-iR_y	(xz, yz)
E_2	1	$-e^*$	-e	1	$-e^*$	-e		
	1	-e	$-e^*$	1	-e	$-e^*$		(x^2-y^2, xy)

$e = \exp(\pi i/3)$