B. The C_n Groups

C_2	E	C_2			
A	1	1	z, R_z	x^2, y^2, z^2, xy	$z^3, xyz, z(x^2 - y^2)$
B	1	-1	x, y, R_x, R_y	yz, xz	$xz^2, yz^2, x(x^2 - 3y^2),\ y(3x^2 - y^2)$

C_3	E	C_3	C_3^2	$\varepsilon = \exp(2\pi i/3)$		
A	1	1	1	z, R_z	$x^2 + y^2, z^2$	$z^3, x(x^2 - 3y^2),\ y(3x^2 - y^2)$
E	$\begin{Bmatrix}1 & \varepsilon & \varepsilon^*\\ 1 & \varepsilon^* & \varepsilon\end{Bmatrix}$			$(x, y),\ (R_x, R_y)$	$(x^2 - y^2, xy),\ (yz, xz)$	$(xz^2, yz^2),\ [xyz, z(x^2 - y^2)]$

C_4	E	C_4	C_2	C_4^3			
A	1	1	1	1	z, R_z	$x^2 + y^2, z^2$	z^3
B	1	-1	1	-1		$x^2 - y^2, xy$	$xyz, z(x^2 - y^2)$
E	$\begin{Bmatrix}1 & i & -1 & -i\\ 1 & -i & -1 & i\end{Bmatrix}$				$(x, y), (R_x, R_y)$	(xz, yz)	$(xz^2, yz^2),\ [x(x^2 - 3y^2), y(3x^2 - y^2)]$

C_5	E	C_5	C_5^2	C_5^3	C_5^4		$\varepsilon = \exp(2\pi i/5)$	
A	1	1	1	1	1	z, R_z	$x^2 + y^2, z^2$	z^3
E_1	$\begin{Bmatrix}1 & \varepsilon & \varepsilon^2 & \varepsilon^{2*} & \varepsilon^*\\ 1 & \varepsilon^* & \varepsilon^{2*} & \varepsilon^2 & \varepsilon\end{Bmatrix}$					$(x, y), (R_x, R_y)$	(yz, xz)	(xz^2, yz^2)
E_2	$\begin{Bmatrix}1 & \varepsilon^2 & \varepsilon^* & \varepsilon & \varepsilon^{2*}\\ 1 & \varepsilon^{2*} & \varepsilon & \varepsilon^* & \varepsilon^2\end{Bmatrix}$						$(x^2 - y^2, xy)$	$[xyz, z(x^2 - y^2)],\ [x(x^2 - 3y^2), y(3x^2 - y^2)]$

C_6	E	C_6	C_3	C_2	C_3^2	C_6^5	$C_6 = C_3 \times C_2$	$\varepsilon = \exp(2\pi i/6)$	
A	1	1	1	1	1	1	z, R_z	$x^2 + y^2, z^2$	z^3
B	1	-1	1	-1	1	-1			$x(x^2 - 3y^2),\ y(3x^2 - y^2)$
E_1	$\begin{Bmatrix}1 & \varepsilon & -\varepsilon^* & -1 & -\varepsilon & \varepsilon^*\\ 1 & \varepsilon^* & -\varepsilon & -1 & -\varepsilon^* & \varepsilon\end{Bmatrix}$						$(x, y),$ (R_x, R_y)	(xz, yz)	(xz^2, yz^2)
E_2	$\begin{Bmatrix}1 & -\varepsilon^* & -\varepsilon & 1 & -\varepsilon^* & -\varepsilon\\ 1 & -\varepsilon & -\varepsilon^* & 1 & -\varepsilon & -\varepsilon^*\end{Bmatrix}$							$(x^2 - y^2, xy)$	$[xyz, z(x^2 - y^2)]$

C_7	E	C_7	C_7^2	C_7^3	C_7^4	C_7^5	C_7^6	$\varepsilon = \exp(2\pi i/7)$		
A	1	1	1	1	1	1	1	z, R_z	$x^2 + y^2, z^2$	z^3
E_1	$\begin{Bmatrix}1 & \varepsilon & \varepsilon^2 & \varepsilon^3 & \varepsilon^{3*} & \varepsilon^{2*} & \varepsilon^*\\ 1 & \varepsilon^* & \varepsilon^{2*} & \varepsilon^{3*} & \varepsilon^3 & \varepsilon^2 & \varepsilon\end{Bmatrix}$							$(x, y),$ (R_x, R_y)	(xz, yz)	(xz^2, yz^2)
E_2	$\begin{Bmatrix}1 & \varepsilon^2 & \varepsilon^{3*} & \varepsilon^* & \varepsilon & \varepsilon^3 & \varepsilon^{2*}\\ 1 & \varepsilon^{2*} & \varepsilon^3 & \varepsilon & \varepsilon^* & \varepsilon^{3*} & \varepsilon^2\end{Bmatrix}$								$(x^2 - y^2, xy)$	$[xyz, z(x^2 - y^2)]$
E_3	$\begin{Bmatrix}1 & \varepsilon^3 & \varepsilon^* & \varepsilon^2 & \varepsilon^{2*} & \varepsilon & \varepsilon^{3*}\\ 1 & \varepsilon^{3*} & \varepsilon & \varepsilon^{2*} & \varepsilon^2 & \varepsilon^* & \varepsilon^3\end{Bmatrix}$									$[x(x^2 - 3y^2), y(3x^2 - y^2)]$

C_8	E	C_8	C_4	C_2	C_4^3	C_8^3	C_8^5	C_8^7	$C_8 = C_4 \times C_2$	$\varepsilon = \exp(2\pi i/8)$	
A	1	1	1	1	1	1	1	1	z, R_z	$x^2 + y^2, z^2$	z^3
B	1	-1	1	1	1	-1	-1	-1			
E_1	$\begin{Bmatrix}1 & \varepsilon & i & -1 & -i & -\varepsilon^* & -\varepsilon & \varepsilon^*\\ 1 & \varepsilon^* & -i & -1 & i & -\varepsilon & -\varepsilon^* & \varepsilon\end{Bmatrix}$								$(x, y),$ (R_x, R_y)	(xz, yz)	(xz^2, yz^2)
E_2	$\begin{Bmatrix}1 & i & -1 & 1 & -1 & -i & i & -i\\ 1 & -i & -1 & 1 & -1 & i & -i & i\end{Bmatrix}$									$(x^2 - y^2, xy)$	$[xyz, z(x^2 - y^2)]$
E_3	$\begin{Bmatrix}1 & -\varepsilon & i & -1 & -i & \varepsilon^* & \varepsilon & -\varepsilon^*\\ 1 & -\varepsilon^* & -i & -1 & i & \varepsilon & \varepsilon^* & -\varepsilon\end{Bmatrix}$										$[x(x^2 - 3y^2), y(3x^2 - y^2)]$