

Direct Product Tables

For the Point Groups O and T_d (and O_h)

	A ₁	A ₂	E	T ₁	T ₂
A ₁	A ₁	A ₂	E	T ₁	T ₂
A ₂		A ₁	E	T ₂	T ₁
E			A ₁ + A ₂ + E	T ₁ + T ₂	T ₁ + T ₂
T ₁				A ₁ + E + T ₁ + T ₂	A ₂ + E + T ₁ + T ₂
T ₂					A ₁ + E + T ₁ + T ₂

For the Point Groups D₄, C_{4v}, D_{2d} (and D_{4h} = D₄ + C_i)

	A ₁	A ₂	B ₁	B ₂	E
A ₁	A ₁	A ₂	B ₁	B ₂	E
A ₂		A ₁	B ₂	B ₁	E
B ₁			A ₁	A ₂	E
B ₂				A ₁	E
E					A ₁ + A ₂ + B ₁ + B ₂

For the Point Groups D₃ and C_{3v}

	A ₁	A ₂	E
A ₁	A ₁	A ₂	E
A ₂		A ₁	E
E			A ₁ + A ₂ + E

For the Point Groups D₆, C_{6v} and D_{3h}*

	A ₁	A ₂	B ₁	B ₂	E ₁	E ₂
A ₁	A ₁	A ₂	B ₁	B ₂	E ₁	E ₂
A ₂		A ₁	B ₂	B ₁	E ₁	E ₂
B ₁			A ₁	A ₂	E ₂	E ₁
B ₂				A ₁	E ₂	E ₁
E ₁					A ₁ + A ₂ + E ₂	B ₁ + B ₂ + E ₁
E ₂						A ₁ + A ₂ + E ₂

* in D_{3h} make the following changes in the above table

In Table	In D _{3h}
A ₁	A ₁ '
A ₂	A ₂ '
B ₁	A ₁ "
B ₂	A ₂ "
E ₁	E"
E ₂	E'