Table 10.1.2.1. *The ten two-dimensional crystallographic point groups*

General, special and limiting edge forms and *point forms* (italics), oriented edge and site symmetries, and Miller indices (*hk*) of equivalent edges [for hexagonal groups Bravais–Miller indices (*hki*) are used if referred to hexagonal axes]; for point coordinates see text.

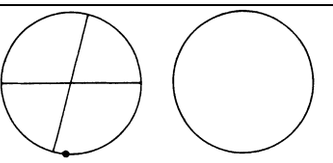
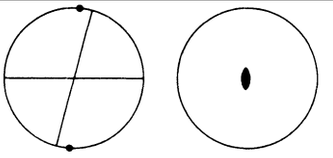
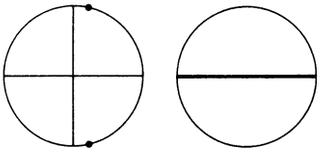
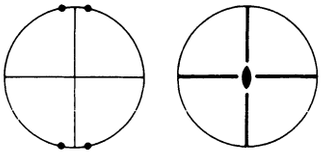
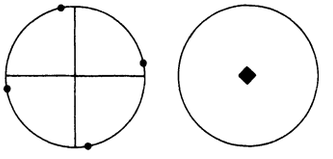
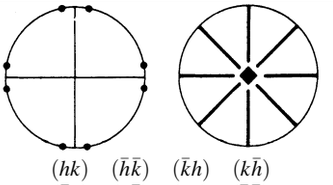
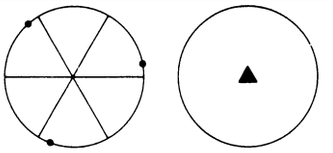
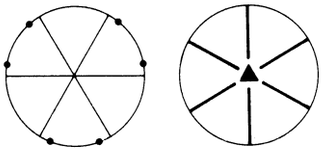
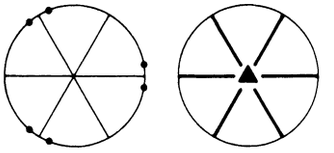
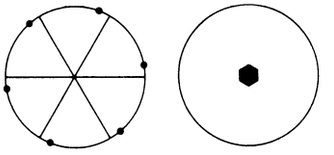
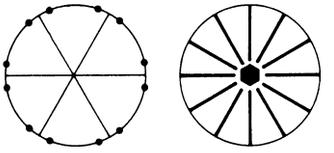
OBLIQUE SYSTEM				
1				
1	*a*	1	Single edge *Single point* (*a*)	(*hk*)
2				
2	*a*	1	Pair of parallel edges *Line segment through origin* (*e*)	(*hk*) $(\bar{h}\bar{k})$
RECTANGULAR SYSTEM				
m				
2	*b*	1	Pair of edges *Line segment* (*c*)	(*hk*) $(\bar{h}k)$
			Pair of parallel edges *Line segment through origin*	(10) $(\bar{1}0)$
1	*a*	.*m*.	Single edge *Single point* (*a*)	(01) or $(0\bar{1})$
2*mm*				
4	*c*	1	Rhomb *Rectangle* (*i*)	(*hk*) $(\bar{h}\bar{k})$ $(\bar{h}k)$ $(h\bar{k})$
2	*b*	.*m*.	Pair of parallel edges *Line segment through origin* (*g*)	(01) $(0\bar{1})$
2	*a*	..*m*	Pair of parallel edges *Line segment through origin* (*e*)	(10) $(\bar{1}0)$
SQUARE SYSTEM				
4				
4	*a*	1	Square *Square* (*d*)	(*hk*) $(\bar{h}\bar{k})$ $(\bar{k}h)$ $(k\bar{h})$
4*mm*				
8	*c*	1	Ditetragon *Truncated square* (*g*)	(*hk*) $(\bar{h}\bar{k})$ $(\bar{k}h)$ $(k\bar{h})$ $(\bar{h}k)$ $(h\bar{k})$ (kh) $(\bar{k}\bar{h})$
4	*b*	..*m*	Square *Square* (*f*)	(11) $(\bar{1}\bar{1})$ $(\bar{1}1)$ $(1\bar{1})$
4	*a*	.*m*.	Square *Square* (*d*)	(10) $(\bar{1}0)$ (01) $(0\bar{1})$

Table 10.1.2.1. *The ten two-dimensional crystallographic point groups* (*cont.*)

HEXAGONAL SYSTEM				
3				
3	*a*	1	Trigon *Trigon* (*d*)	(hki) (ihk) (kih)
3*m*1				
6	*b*	1	Ditrigon *Truncated trigon* (*e*)	(hki) (ihk) (kih) $(\bar{k}\bar{h}i)$ $(i\bar{k}\bar{h})$ $(\bar{h}ik)$
			Hexagon *Hexagon*	$(11\bar{2})$ $(\bar{2}11)$ $(1\bar{2}1)$ $(\bar{1}\bar{1}2)$ $(2\bar{1}\bar{1})$ $(\bar{1}21)$
3	*a*	.*m*.	Trigon *Trigon* (*d*)	$(10\bar{1})$ $(\bar{1}10)$ $(0\bar{1}1)$ or $(\bar{1}01)$ $(1\bar{1}0)$ $(01\bar{1})$
31*m*				
6	*b*	1	Ditrigon *Truncated trigon* (*d*)	(hki) (ihk) (kih) (khi) (ikh) (hik)
			Hexagon *Hexagon*	$(10\bar{1})$ $(\bar{1}10)$ $(0\bar{1}1)$ $(01\bar{1})$ $(\bar{1}01)$ $(1\bar{1}0)$
3	*a*	..*m*	Trigon *Trigon* (*c*)	$(11\bar{2})$ $(\bar{2}11)$ $(1\bar{2}1)$ or $(\bar{1}\bar{1}2)$ $(2\bar{1}\bar{1})$ $(\bar{1}21)$
6				
6	*a*	1	Hexagon *Hexagon* (*d*)	(hki) (ihk) (kih) $(\bar{h}\bar{k}i)$ $(i\bar{h}\bar{k})$ $(\bar{k}ih)$
6*mm*				
12	*c*	1	Dihexagon *Truncated hexagon* (*f*)	(hki) (ihk) (kih) $(\bar{h}ki)$ $(i\bar{h}k)$ $(k\bar{i}h)$ $(\bar{k}\bar{h}i)$ $(i\bar{k}\bar{h})$ $(\bar{h}ik)$ (khi) (ikh) (hik)
6	*b*	.*m*.	Hexagon *Hexagon* (*e*)	$(10\bar{1})$ $(\bar{1}10)$ $(0\bar{1}1)$ $(\bar{1}01)$ $(1\bar{1}0)$ $(01\bar{1})$
6	*a*	..*m*	Hexagon *Hexagon* (*d*)	$(11\bar{2})$ $(\bar{2}11)$ $(1\bar{2}1)$ $(\bar{1}\bar{1}2)$ $(2\bar{1}\bar{1})$ $(\bar{1}21)$

references