

```

lat.Const=[1] // lattice constant, 1x1 real
lat.Primitive=[-3/2,sqrt(3)/2;3/2,sqrt(3)/2] // Primitive vectors, (3x3/2x2/1x1)
lat.Sublatt=[0,0;1,0] // sublattice position, (nx3/nx2/nx1/)
lat.Order=[2] // Nearest Neighbor Order, 1x1 integer

```

===== PiLib Variable =====

```

lat.recip_vec, @full, the reciprocal lattice vectors
ORDER= 0, SIZE=[ 2, 2], TYPE=REAL

```

1	2
-2.094395	3.627599
2.094395	3.627599

===== PiLib Variable =====

```

lat.surr_site(1), @full, surrouding sites [order, dist, sublatt, n1, n2, n3, x, y, z]
ORDER= 0, SIZE=[ 10, 9], TYPE=REAL

```

1	2	3	4	5	6	7	8	9
0.000000	0.000000	1.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
1.000000	1.000000	2.000000	0.000000	-1.000000	0.000000	-0.500000	-0.866025	0.000000
1.000000	1.000000	2.000000	0.000000	0.000000	0.000000	1.000000	0.000000	0.000000
1.000000	1.000000	2.000000	1.000000	0.000000	0.000000	-0.500000	0.866025	0.000000
2.000000	1.732051	1.000000	-1.000000	-1.000000	0.000000	0.000000	-1.732051	0.000000
2.000000	1.732051	1.000000	-1.000000	0.000000	0.000000	1.500000	-0.866025	0.000000
2.000000	1.732051	1.000000	0.000000	-1.000000	0.000000	-1.500000	-0.866025	0.000000
2.000000	1.732051	1.000000	0.000000	1.000000	0.000000	1.500000	0.866025	0.000000
2.000000	1.732051	1.000000	1.000000	0.000000	0.000000	-1.500000	0.866025	0.000000
2.000000	1.732051	1.000000	1.000000	1.000000	0.000000	0.000000	1.732051	0.000000

===== PiLib Variable =====

```

lat.surr_site(2), @full, surrouding sites [order, dist, sublatt, n1, n2, n3, x, y, z]
ORDER= 0, SIZE=[ 10, 9], TYPE=REAL

```

1	2	3	4	5	6	7	8	9
0.000000	0.000000	2.000000	0.000000	0.000000	0.000000	1.000000	0.000000	0.000000
1.000000	1.000000	1.000000	-1.000000	0.000000	0.000000	1.500000	-0.866025	0.000000
1.000000	1.000000	1.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
1.000000	1.000000	1.000000	0.000000	1.000000	0.000000	1.500000	0.866025	0.000000
2.000000	1.732051	2.000000	-1.000000	-1.000000	0.000000	1.000000	-1.732051	0.000000
2.000000	1.732051	2.000000	-1.000000	0.000000	0.000000	2.500000	-0.866025	0.000000
2.000000	1.732051	2.000000	0.000000	-1.000000	0.000000	-0.500000	-0.866025	0.000000
2.000000	1.732051	2.000000	0.000000	1.000000	0.000000	2.500000	0.866025	0.000000
2.000000	1.732051	2.000000	1.000000	0.000000	0.000000	-0.500000	0.866025	0.000000
2.000000	1.732051	2.000000	1.000000	1.000000	0.000000	1.000000	1.732051	0.000000