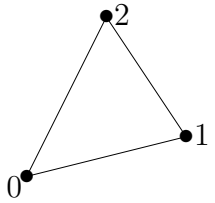
1 Triangular grid cell

1.1 node numbering

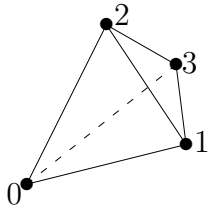


The edges are create from the nodes as follows:

- $\boxed{0}$ — 1, 2
- $\boxed{1}$ — 2, 0
- $\boxed{2}$ — 0, 1

2 Tetrahedral grid cell

2.1 node numbering

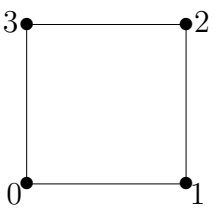


The surfaces are create from the nodes as follows:

- $\boxed{0}$ — 1, 2, 3
- $\boxed{1}$ — 2, 3, 0
- $\boxed{2}$ — 3, 0, 1
- $\boxed{3}$ — 0, 1, 2

3 Polygonal grid cell

3.1 node numbering

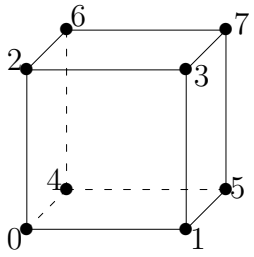


The edges are create from the nodes as follows:

- 0 — 0, 1
- 1 — 1, 2
- 2 — 2, 3
- 3 — 3, 0

4 Polyhedral grid cell

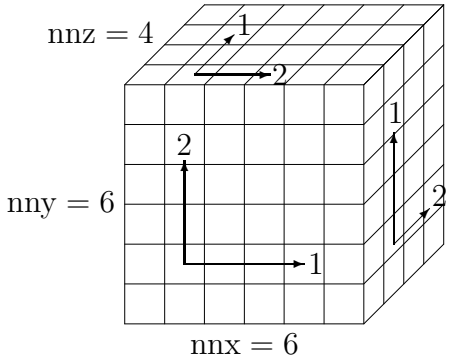
4.1 node numbering



The surfaces are create from the nodes as follows:

- 0 — 0, 1, 3, 2
- 1 — 1, 5, 7, 3
- 2 — 3, 7, 6, 2
- 3 — 7, 5, 4, 6
- 4 — 6, 4, 0, 2
- 5 — 4, 5, 1, 0

4.2 surface neighbours



	$i+\text{nnx}-1$	$i+\text{nnx}$	$i+\text{nnx}+1$
$\boxed{0}$	$i-1$	i	$i+1$
front	$i-\text{nnx}-1$	$i-\text{nnx}$	$i-\text{nnx}-1$
	$i-\text{nny}+1$	$i+1$	$i+\text{nny}+1$
$\boxed{1}$	$i-\text{nny}$	i	$i+\text{nny}$
right	$i-\text{nny}-1$	$i-1$	$i+\text{nny}-1$
	$i+\text{nnz}-1$	$i+1$	$i+\text{nnz}+1$
$\boxed{2}$	$i-\text{nnz}$	i	$i+\text{nnz}$
top	$i-\text{nnz}-1$	$i-1$	$i-\text{nnz}+1$
	$i+\text{nnx}-1$	$i+\text{nnx}$	$i+\text{nnx}+1$
$\boxed{3}$	$i-1$	i	$i+1$
back	$i-\text{nnx}-1$	$i-\text{nnx}$	$i-\text{nnx}+1$
	$i-\text{nny}+1$	$i+1$	$i+\text{nny}+1$
$\boxed{4}$	$i-\text{nny}$	i	$i+\text{nny}$
left	$i-\text{nny}-1$	$i-1$	$i+\text{nny}-1$
	$i+\text{nnz}-1$	$i+1$	$i+\text{nnz}+1$
$\boxed{5}$	$i-\text{nnz}$	i	$i+\text{nnz}$
bottom	$i-\text{nnz}-1$	$i-1$	$i-\text{nnz}+1$

Note that $\boxed{0}$ and $\boxed{3}$ are the same. Similary with $\boxed{1}$ and $\boxed{4}$, and with $\boxed{2}$ and $\boxed{5}$.

		1	2	1 2	1 2^-	1^- 2	1^- 2^-
nnx nny	0	nnz	1	1, nnz	1, $-$nnz	-1, nnz	-1, $-$nnz
nny nnz	1	nnx	1	1, nnx	1, $-$nnx	-1, nnx	-1, $-$nnx
nnz nnx	2	nny	1	1, nny	1, $-$nny	-1, nny	-1, $-$nny

	a1	a2	
0	+1	+fdn	surf_n
1	+fdn	+1	
2	+1	+fdn	$\boxed{0}$
3	+1	+fdn	
4	+fdn	+1	
5	+1	+fdn	

	a1	a2	
0	+1	$-$fdn	surf_n + fd + 1
1	$-$fdn	+1	
2	+1	$-$fdn	$\boxed{1}$
3	+1	$-$fdn	
4	$-$fdn	+1	
5	+1	$-$fdn	

	a1	a2	
0	+fdn	−1	surf_n + fd1 × fd2 − fd1
1	+fdn	−1	
2	−1	+fdn	$\boxed{2}$
3	+fdn	−1	
4	+fdn	−1	
5	−1	+fdn	

	a1	a2	
0	−1	−fdn	surf_n + fd1 × fd2 − 1
1	−1	−fdn	
2	−fdn	−1	$\boxed{2}$
3	−1	−fdn	
4	−1	−fdn	
5	−fdn	−1	