

## Functions

```
join_triangle_with_large_angle(mesh)
```

For each mesh TRIANGLE with an angle A bigger than  $120^\circ$ , delete the longest mesh edge the one opposite A,) joining the triangle to the cell on the opposite side.

```
collapse_shortest_edge_for_small_angle_cell(mesh)
```

For each mesh TRIANGLE with an angle A" smaller than  $30^\circ$  but no angles bigger than  $150^\circ$ , collapse the shortest mesh edge (the one opposite A").

```
split_all_cells(mesh)
```

Split every mesh cell with more than three vertices until the entire mesh is a triangle (split the mesh cell from the cell vertex with maximum angle).

## Algorithm

```
split_all_cells(mesh)
```

```
old_triangles = mesh.NumCells()
```

```
for iteration in range(10):
```

```
    join_triangle_with_large_angle(mesh)
```

```
    split_all_cells(mesh)
```

```
    collapse_shortest_edge_for_small_angle_cell(mesh)
```

```
    if old_triangles == mesh.NumCells():
```

```
        break
```