

```
1 #include "Polygon.h"
2
3 float Polygon::getSignedArea() const
4 {
5     float Result = 0.0f;
6
7     if (fNumberOfVertices > 2)
8     {
9         for (size_t i = 0; i < fNumberOfVertices; i++)
10        {
11            size_t j = (i + 1) % fNumberOfVertices;
12            // shoelace algorithm
13            Result += 0.5 * (fVertices[i].getX() * fVertices[j].getY() -
14                           fVertices[i].getY() * fVertices[j].getX());
15        }
16    }
17    return Result;
18 }
```