

# Quiz 1 Information

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Math 282 Computational Geometry

The first quiz will be Friday, January 6. To prepare for this quiz, you should study the material in Sections 1.1 to 1.3 of the text. Focus on the *definitions*, *examples*, *theorems*, and *questions* in the text.

In particular, you should be able to do the following:

1. Be able to state precise definitions of the following terms and give examples of them:
  - polygon, edge, vertex, polyhedron
  - diagonal, triangulation, tetrahedralization
  - visible, covers
2. Be able to give precise answers to the following questions:
  - Can every polygon be triangulated? Why or why not?
  - Can every polyhedron be tetrahedralized? Why or why not?
  - How does the number of triangulations of a polygon with  $n$  sides relate to the Catalan numbers?
  - What does the Art Gallery Theorem say? What techniques are involved in its proof?
  - Does the Art Gallery Theorem hold for polyhedra? Why is this more challenging in 3D than in 2D?