Depth Calculations in OpenGL

- **Initializing the depth buffer (z-buffer)**

  glutInitDisplayMode(GLUT_DOUBLE | GLUT_RGB | GLUT_DEPTH);

- **Enabling hidden-surface removal**

  glEnable(GL_DEPTH_TEST)

- **Clearing the depth buffer**

  - The depth buffer must be cleared every time the scene is drawn !!

  glClear(GL_DEPTH_BUFFER_BIT);

- **Back-face culling**

  - How do we decide which is the front of a polygon ?

    The vertices of the front face should appear in a counter-clockwise order

  - Enable back-face culling: *glEnable(GL_CULL_FACE);*

  - Disable back-face culling: *glDisable(GL_CULL_FACE);*

  - Specify faces to be discarded: *glCullFace(GLenum mode);*

  where mode: *GL_FRONT*, *GL_BACK*, *GL_FRONT_AND_BACK*