Define problem & set up the mesh

set up IEN array

ID array

stiffness matrix

zero element stiffness matrix

zero element Load vector

map the $X_A \leftrightarrow \xi_a$

use Gauss quadrature

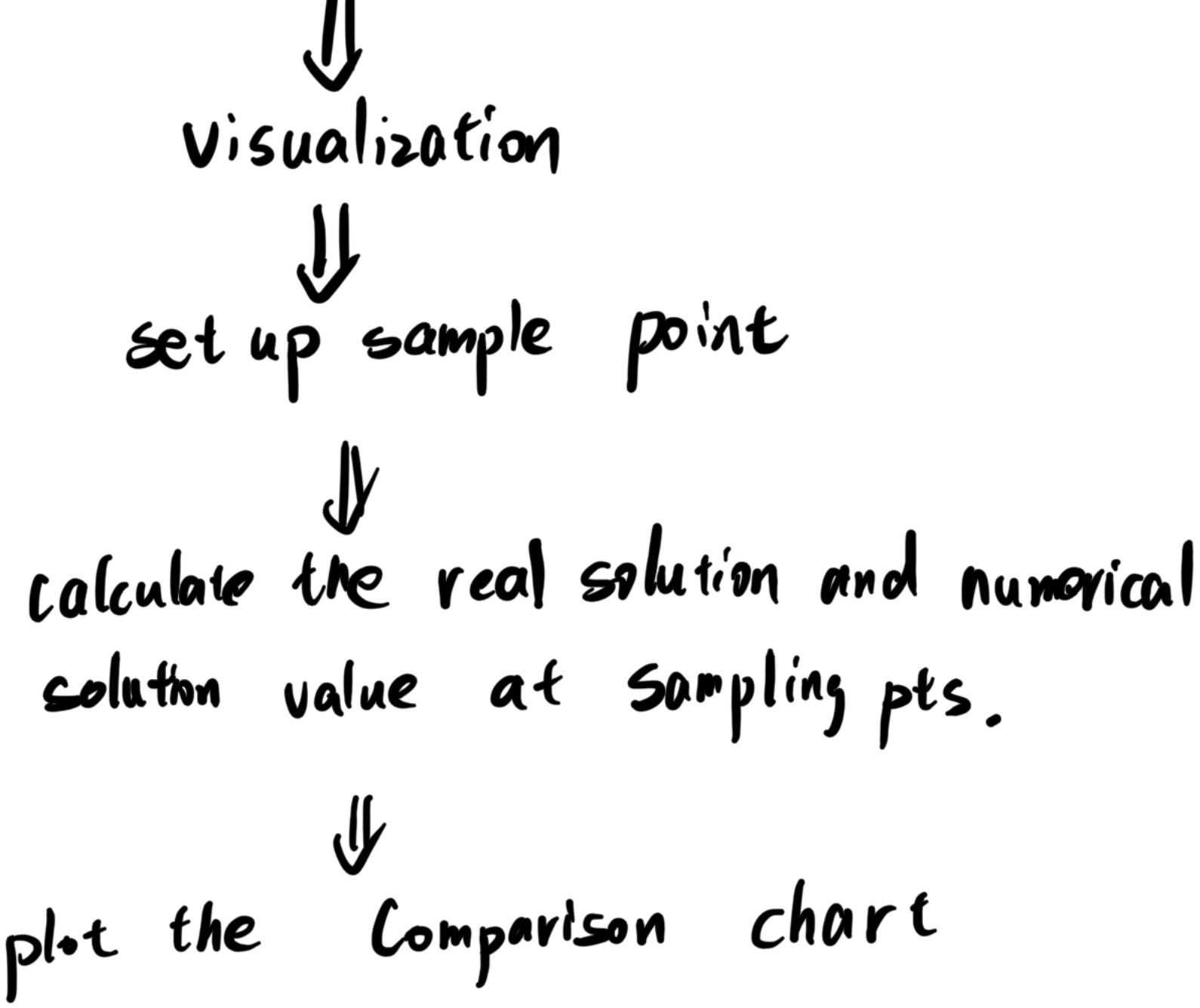
element stiffness matrix K_{ab}

element Load vector F_a

put them into K

put them into F

Solve $Kd = F$ equation


Visualization
set up sample point
calculate the real solution and numerical solution value at sampling pts.
plot the Comparison chart