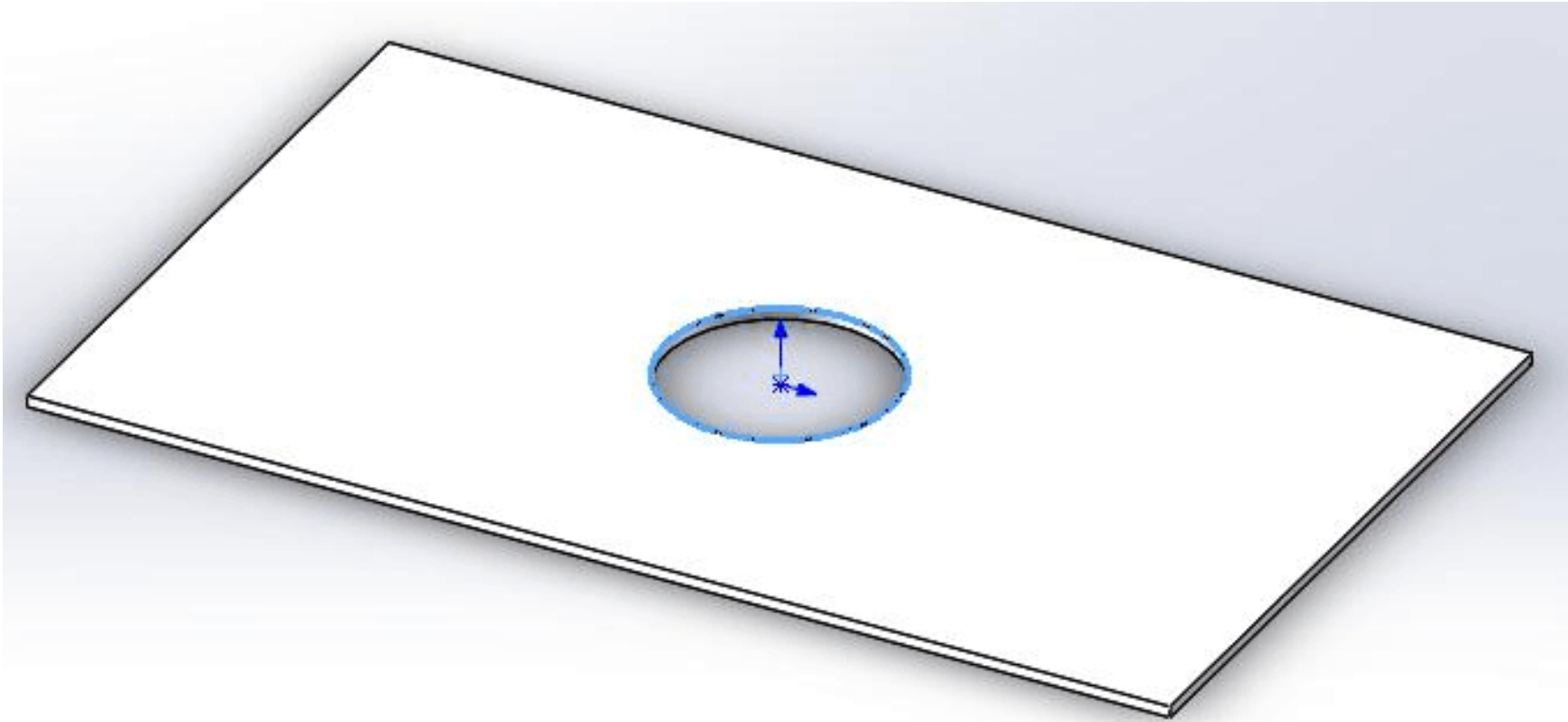


ANSYS APDL线性静力学分析-薄板圆孔构件承载分析

1.问题描述

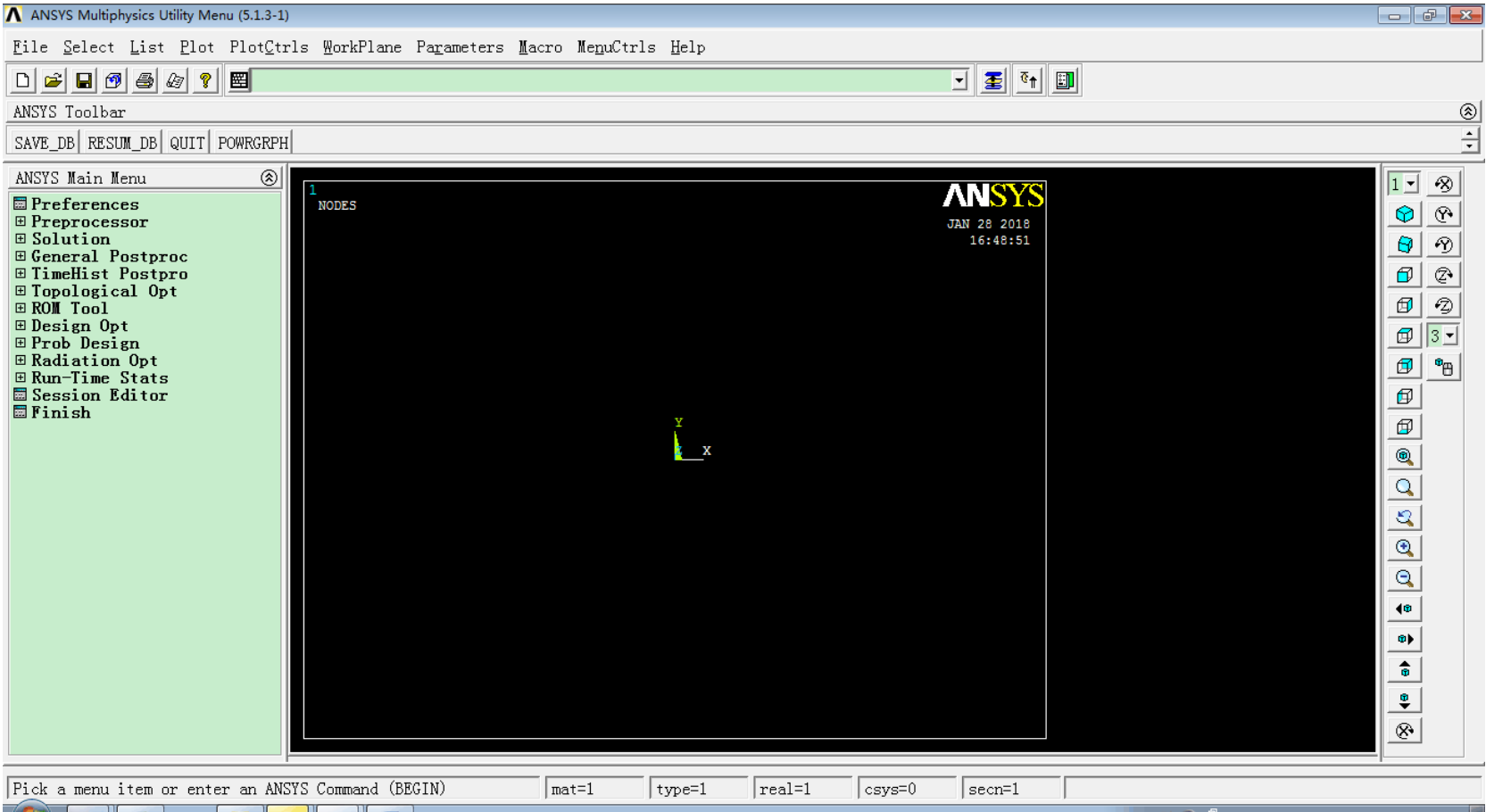


薄板承载示意图

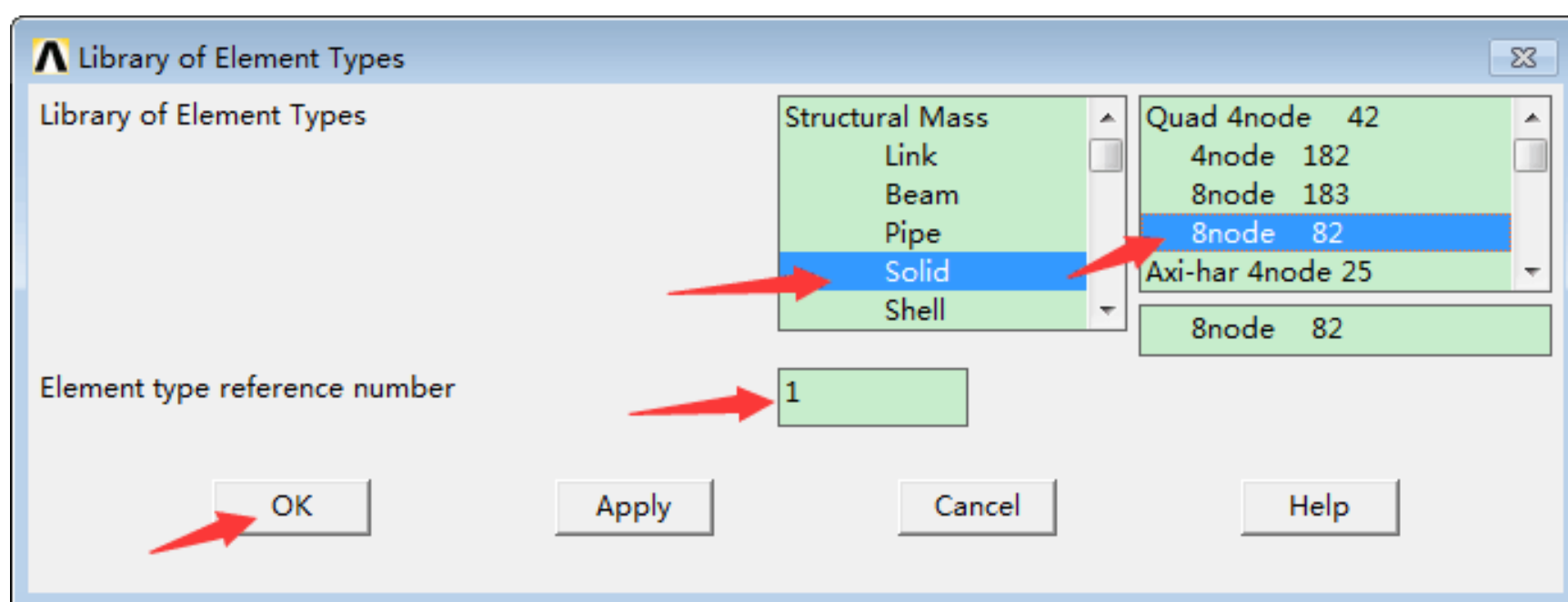
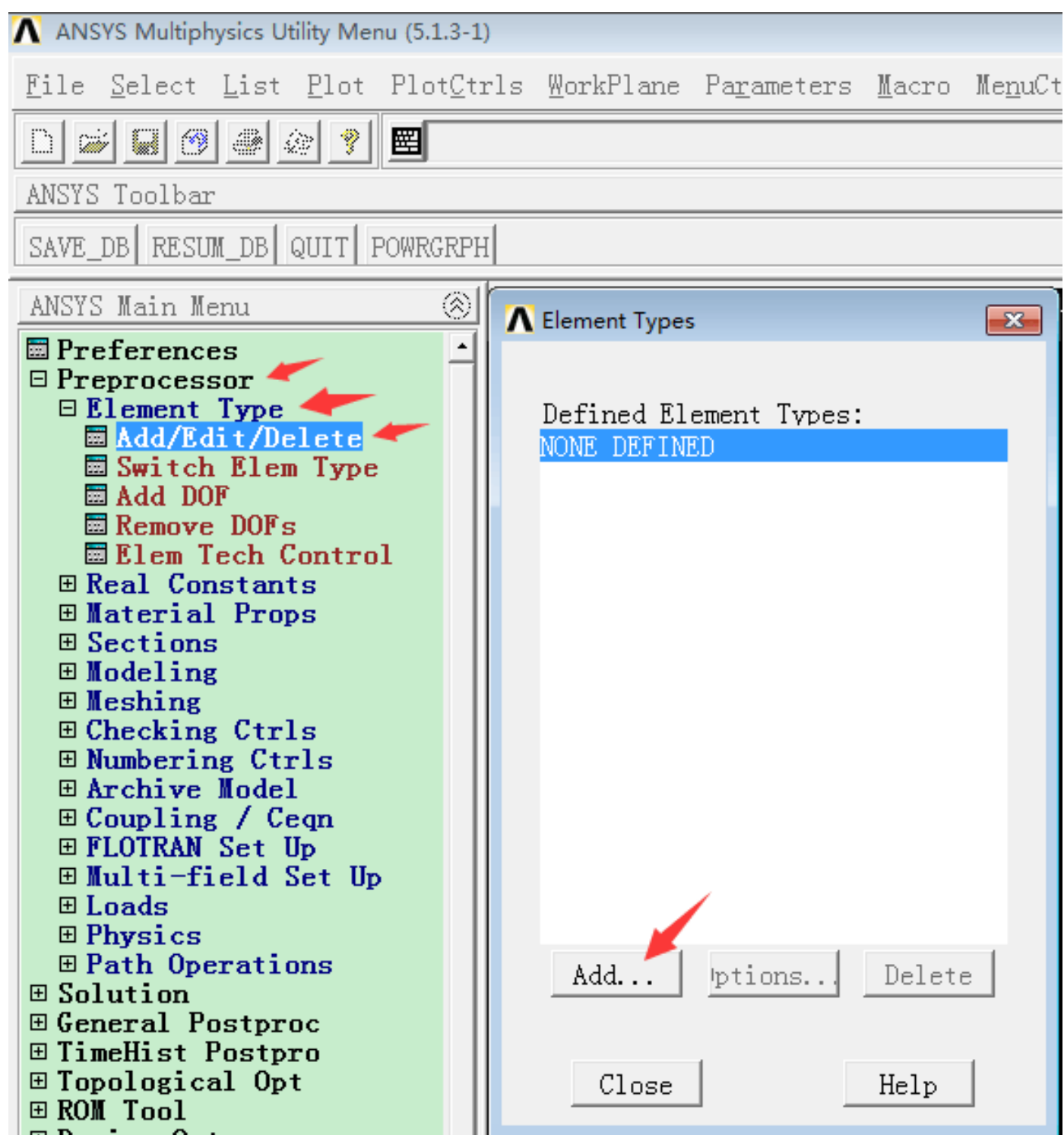
中心带有圆孔的薄板，厚 0.01m，长 1m，宽 0.6m，圆孔直径 0.2m，在其两端承受均布载荷 0.5Mpa，求薄板内部应力场分布。E=69Gpa， μ =0. 3.

2.分析步骤

(1) 建立文件名、标题

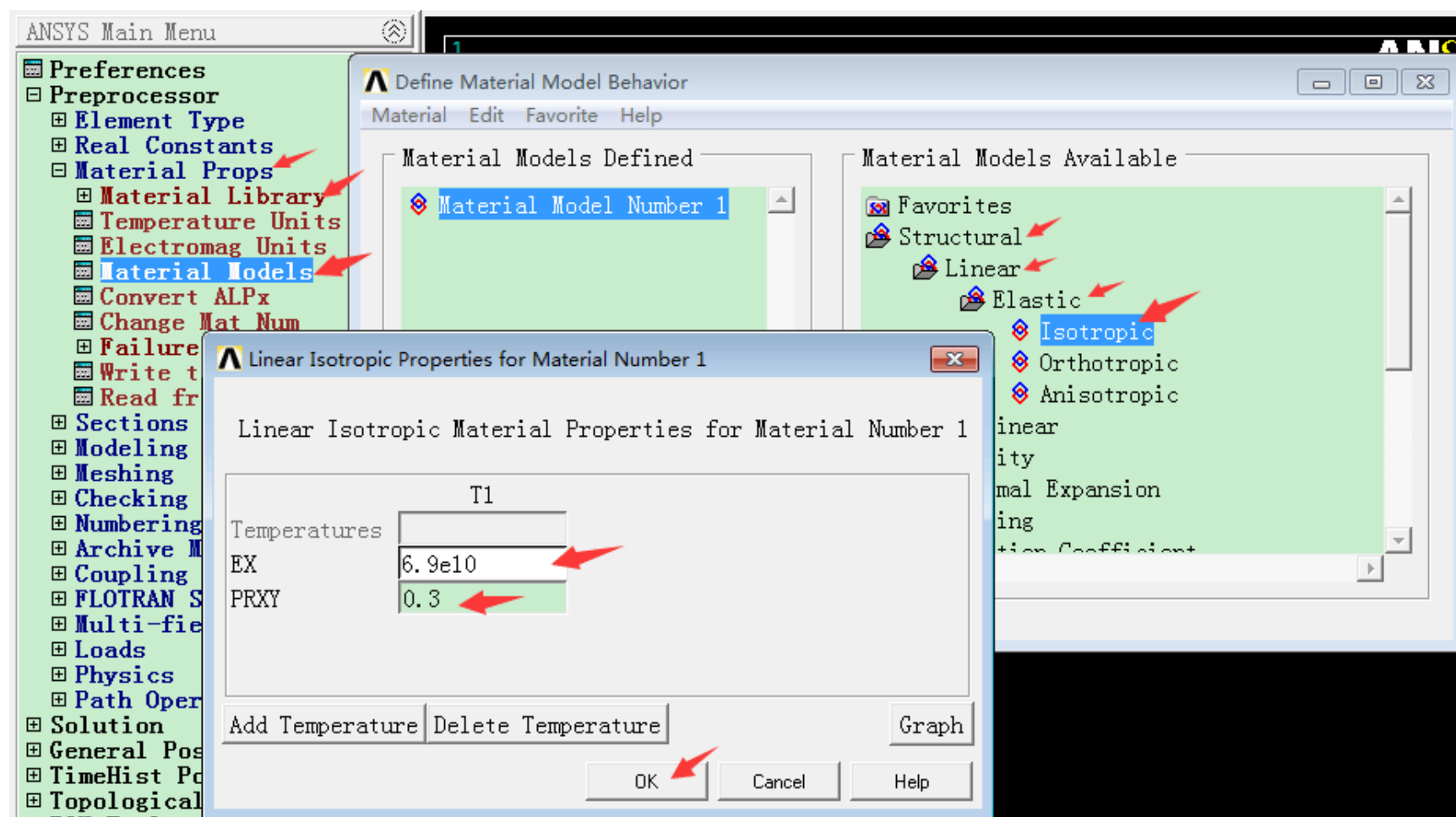


(2) 定义单元类型



不飞则已，一飞冲天；一鸣则已，一鸣惊人。——《韩非子》

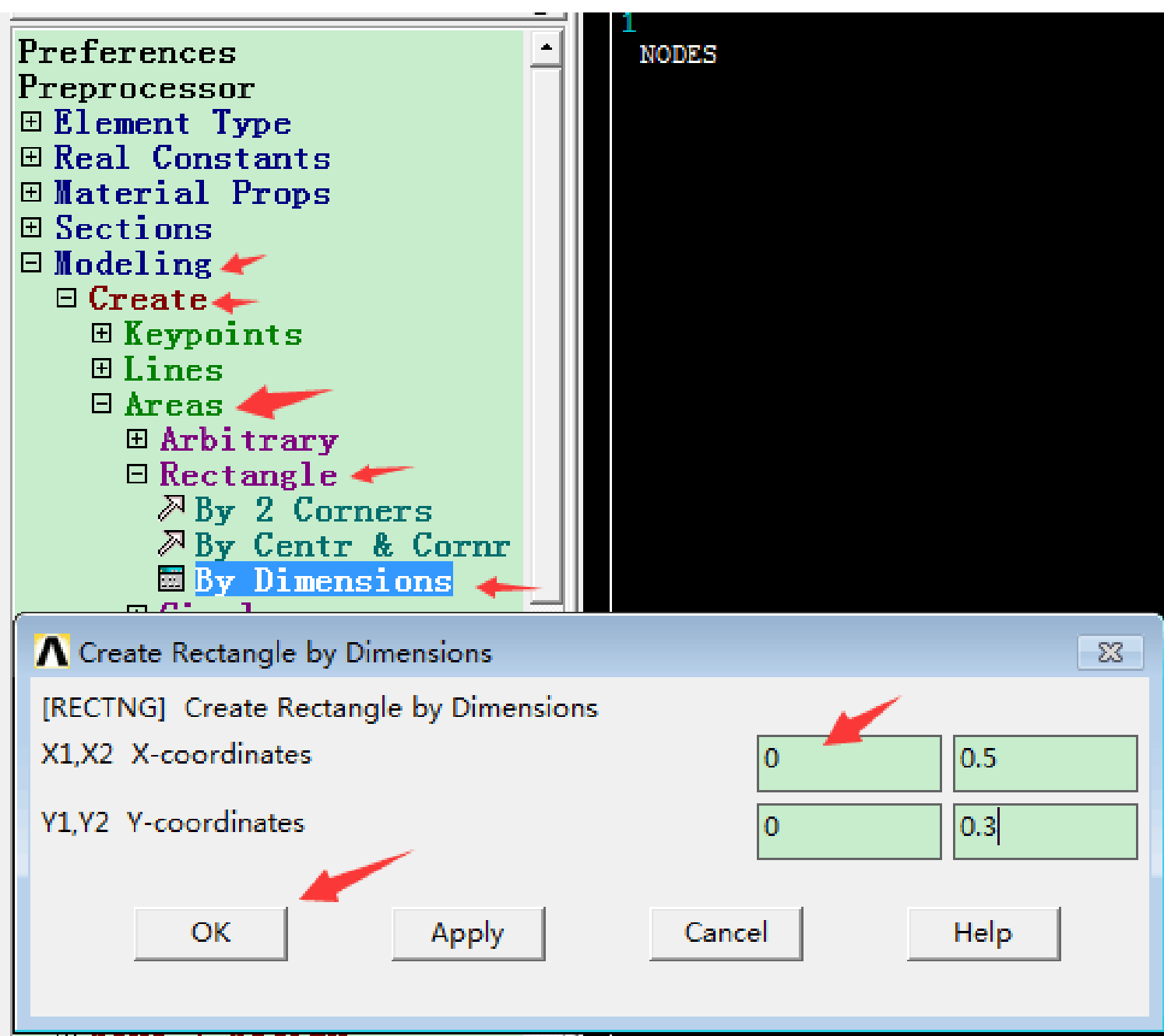
(3) 定义材料属性



Material→exit

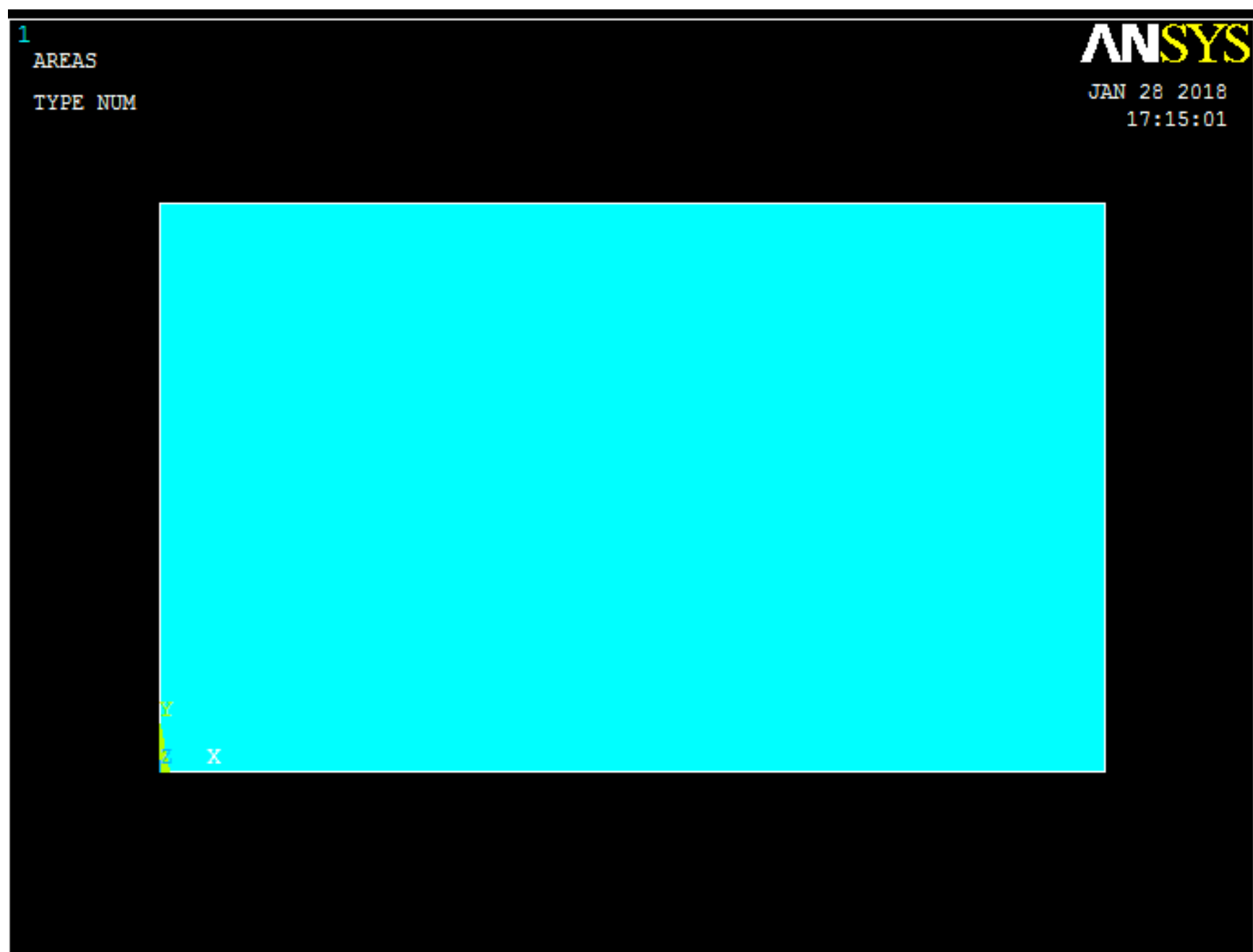
(4) 创建几何模型

先画 1/4矩形

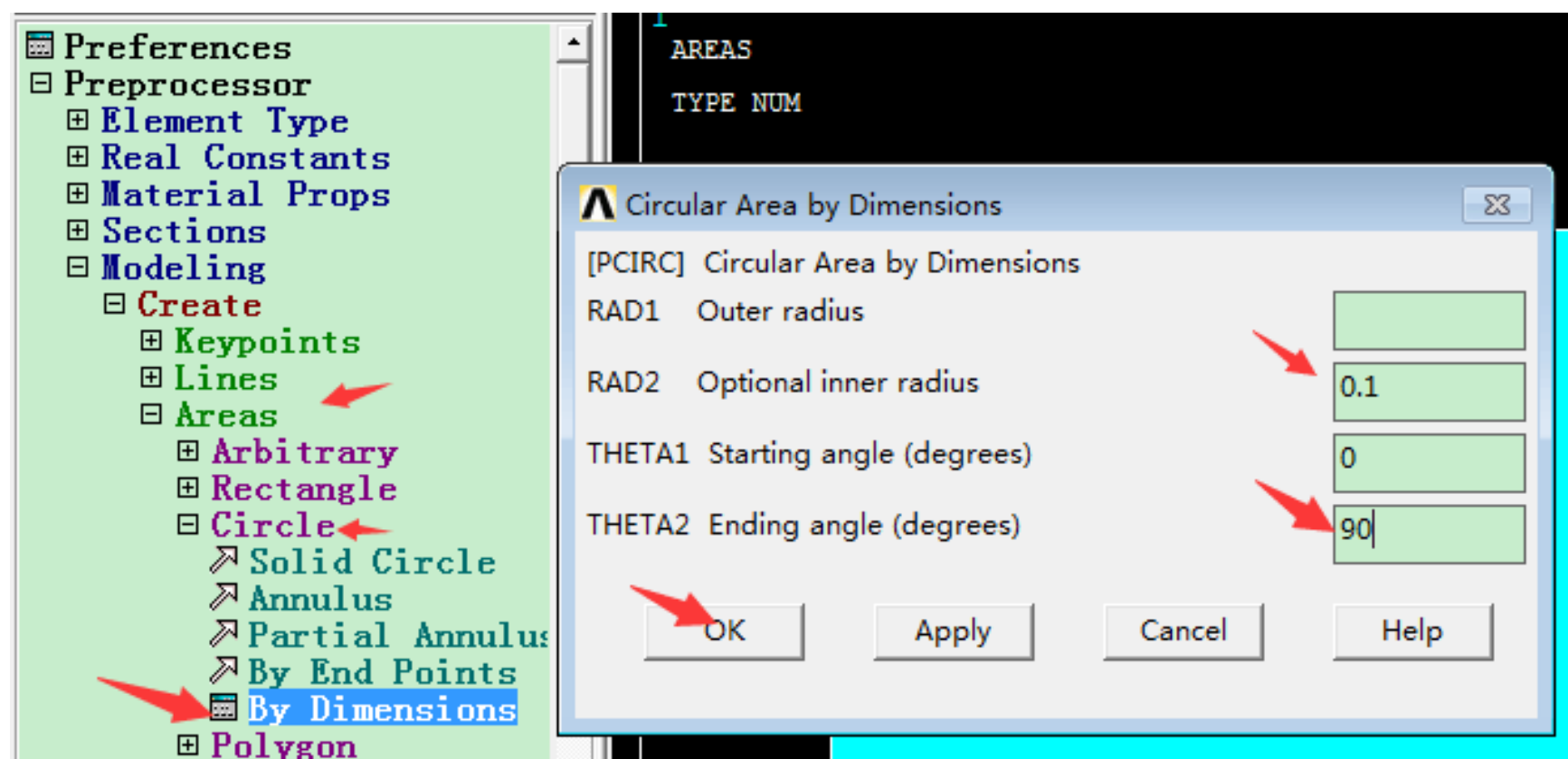


穷则独善其身，达则兼善天下。——《孟子》

生成如下矩形

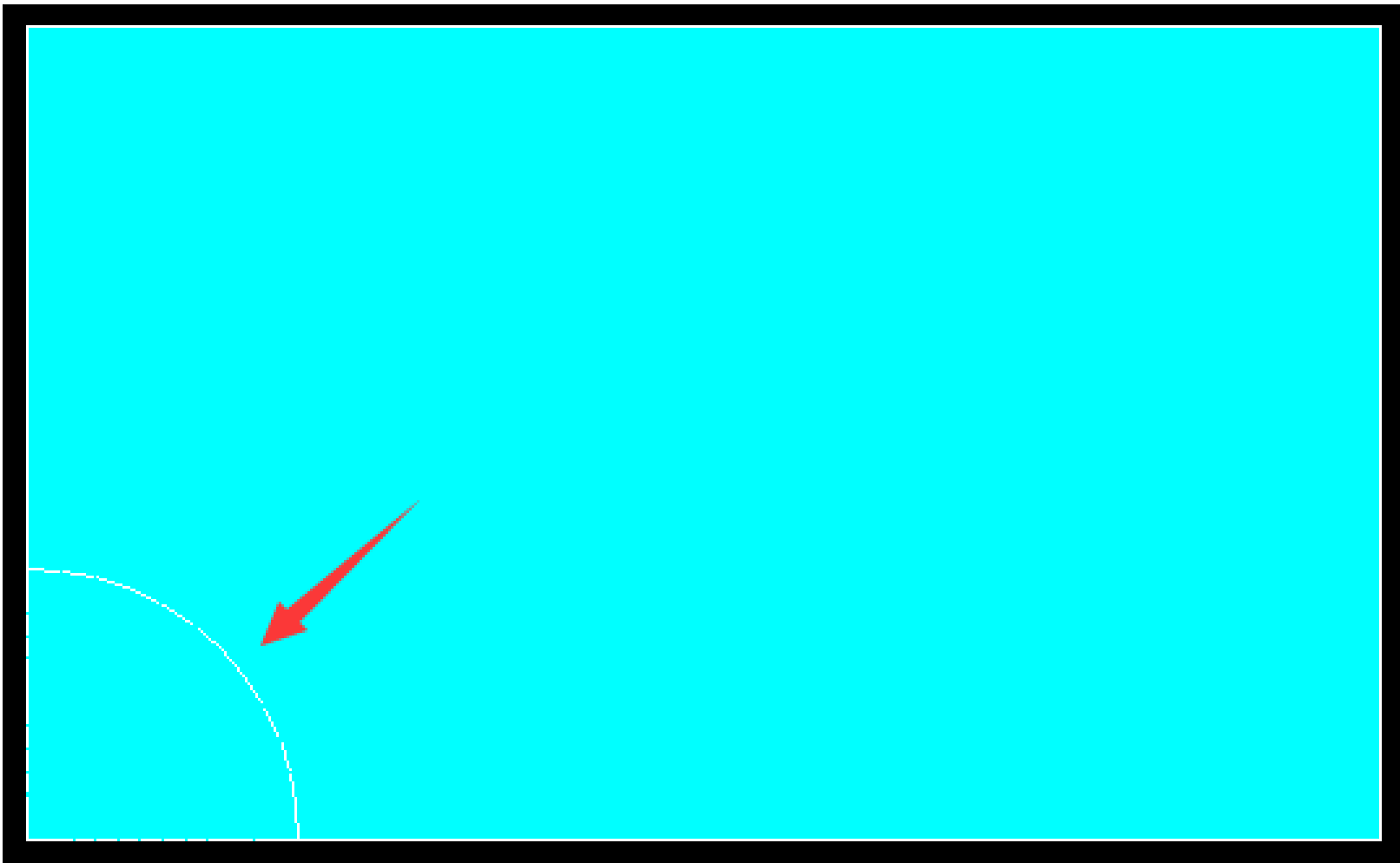


再画 1/4圆

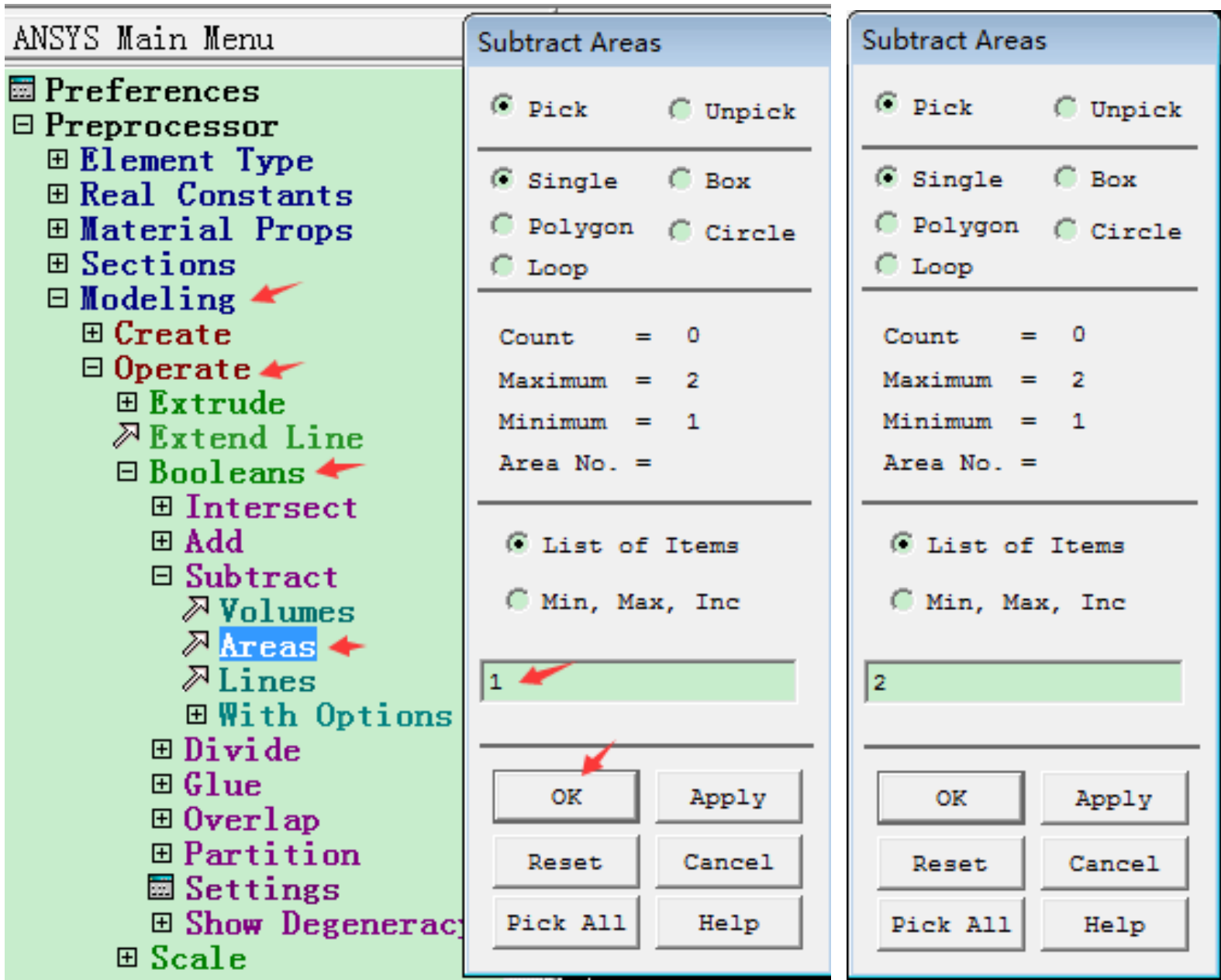


生成 1/4圆

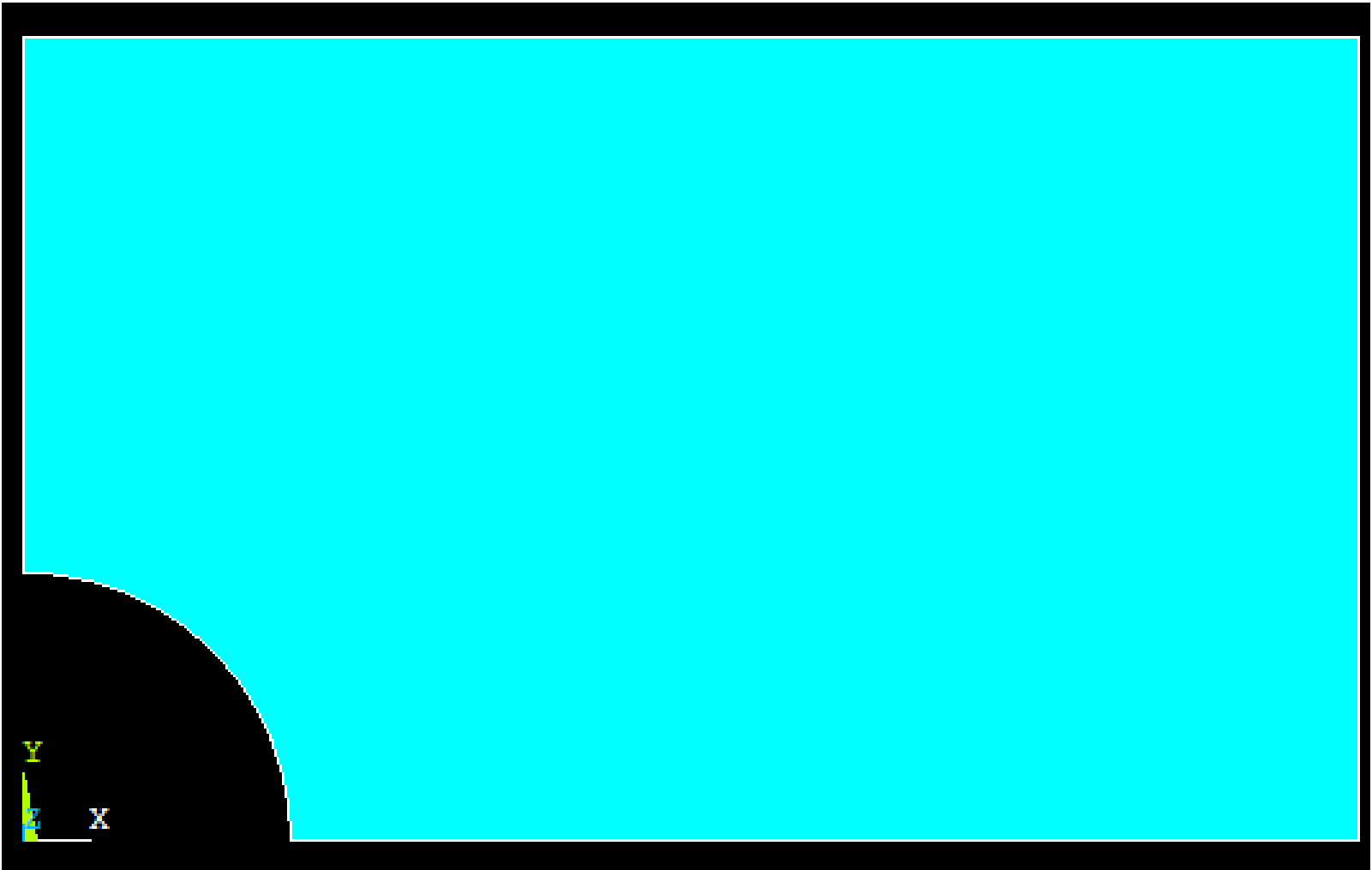
乐民之乐者，民亦乐其乐；忧民之忧者，民亦忧其忧。——《孟子》



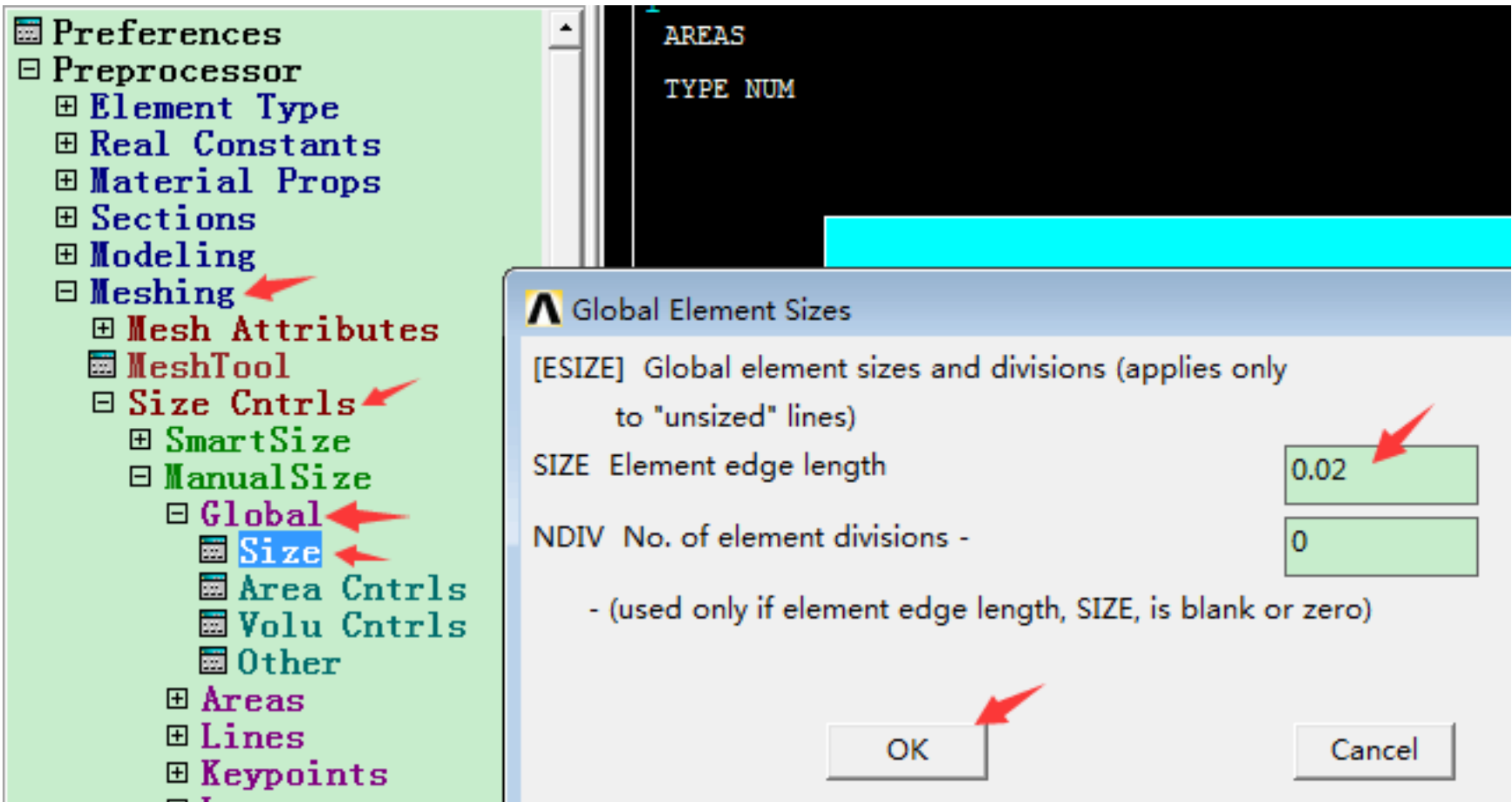
然后，矩形减 1/4圆



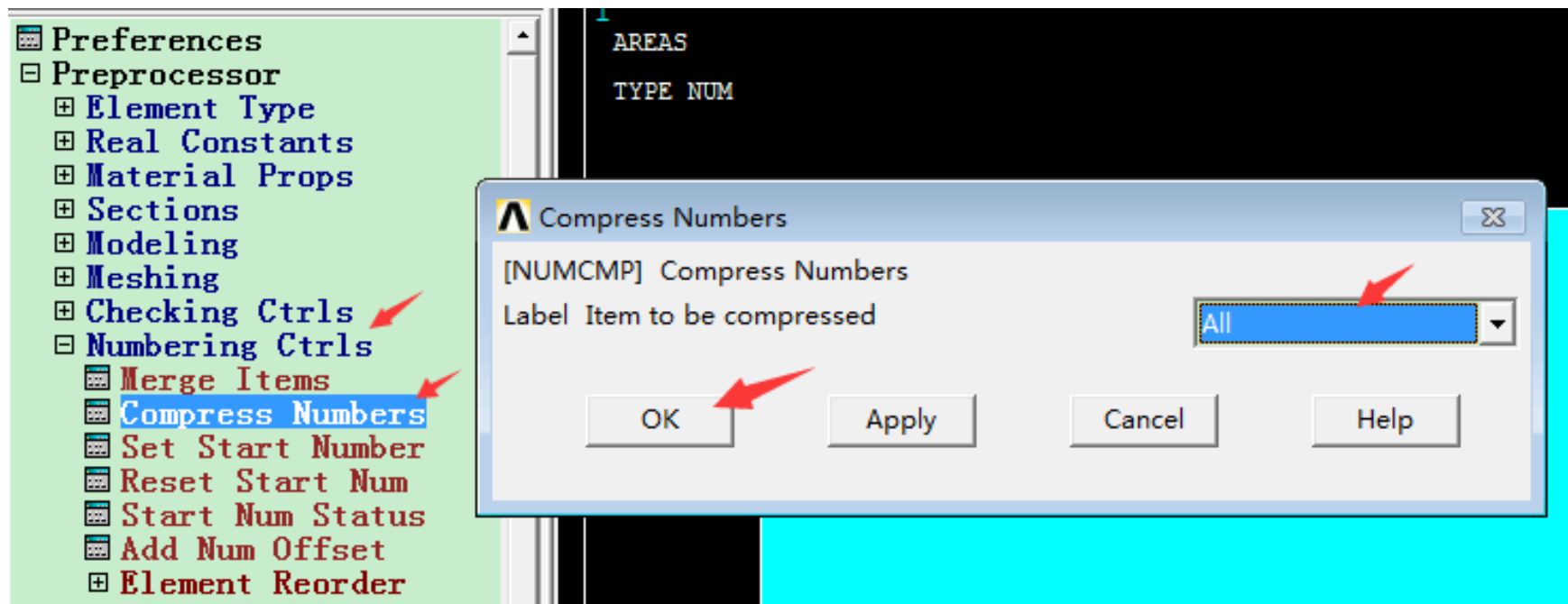
相减后的结果：



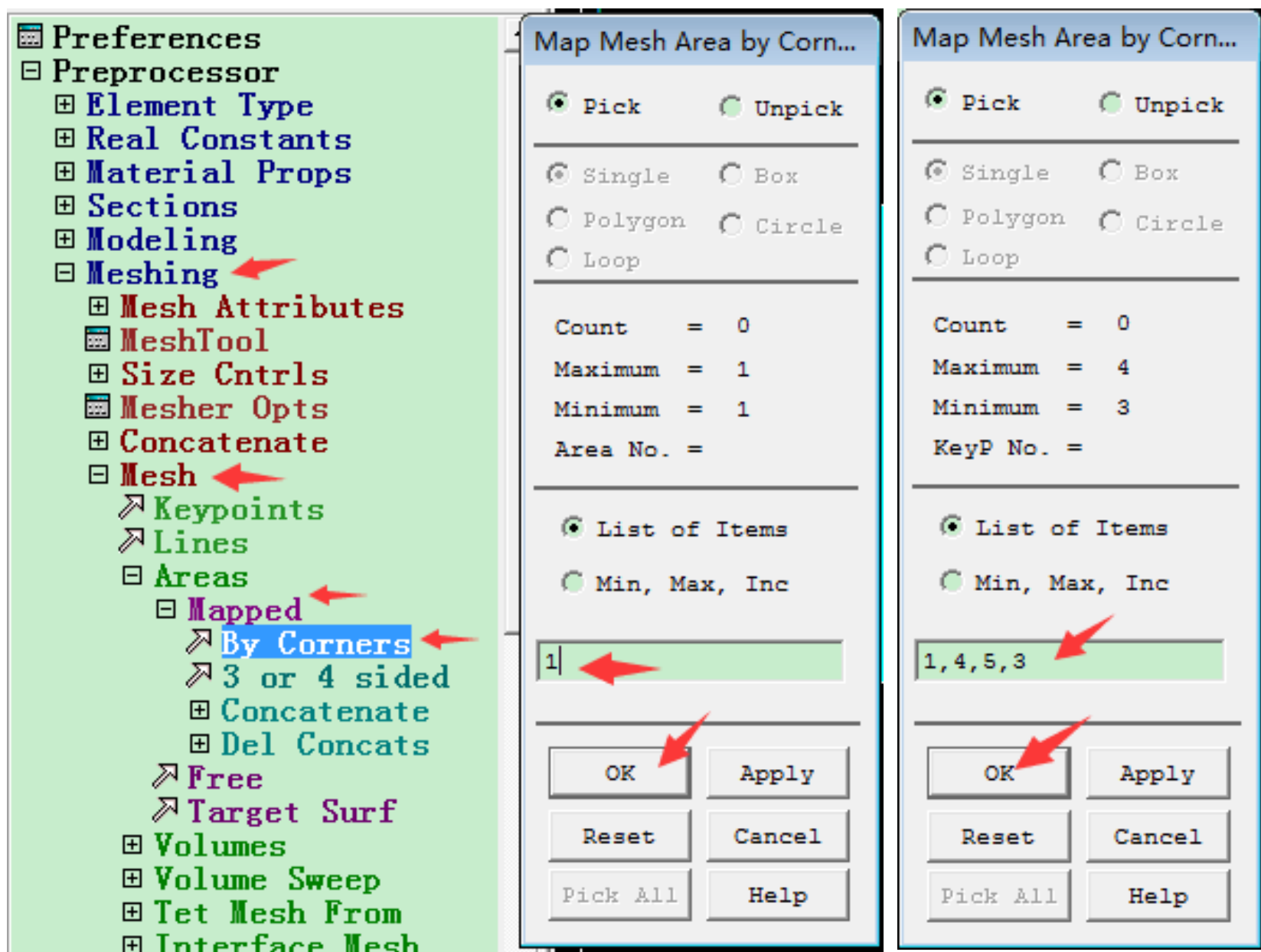
手动划分网格大小 0.02



接着，编号控制

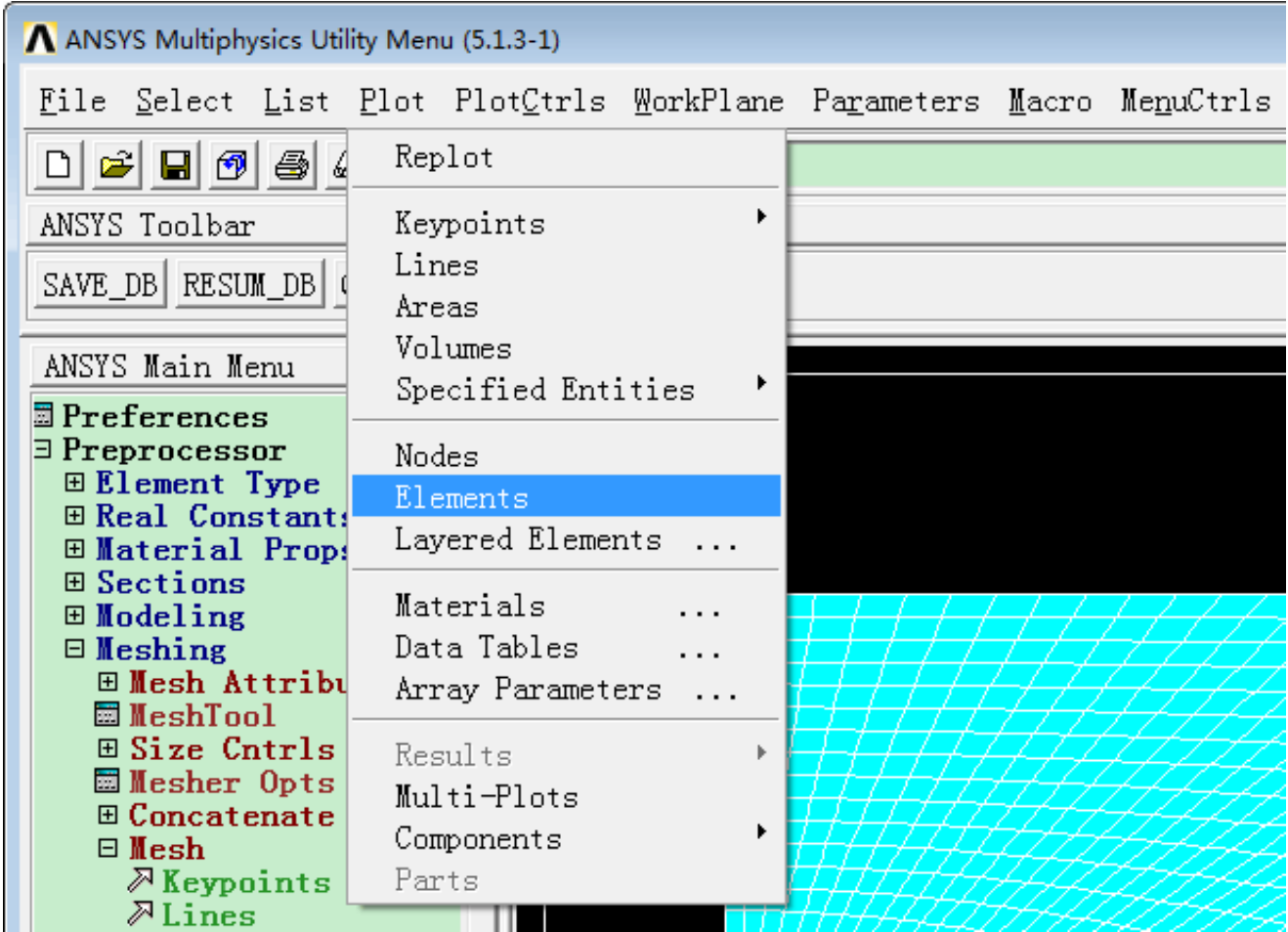
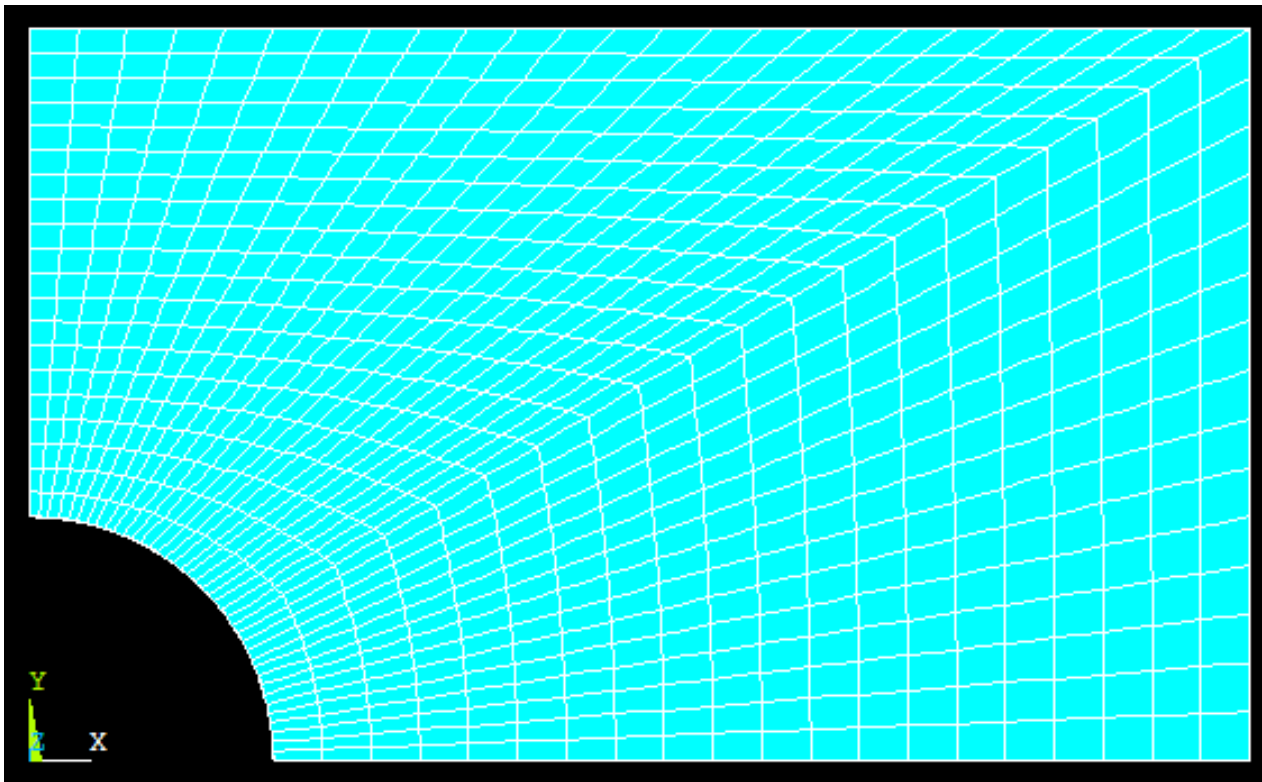


(5) 划分网格

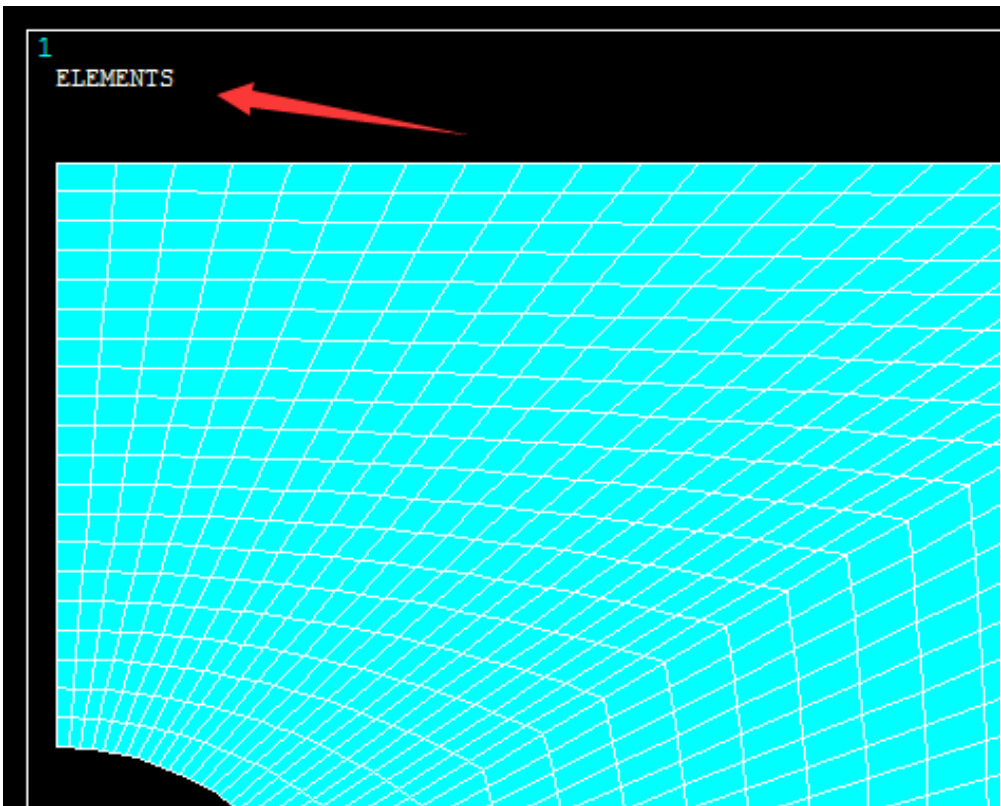


结果如下

以家为家，以乡为乡，以国为国，以天下为天下。——《管子》

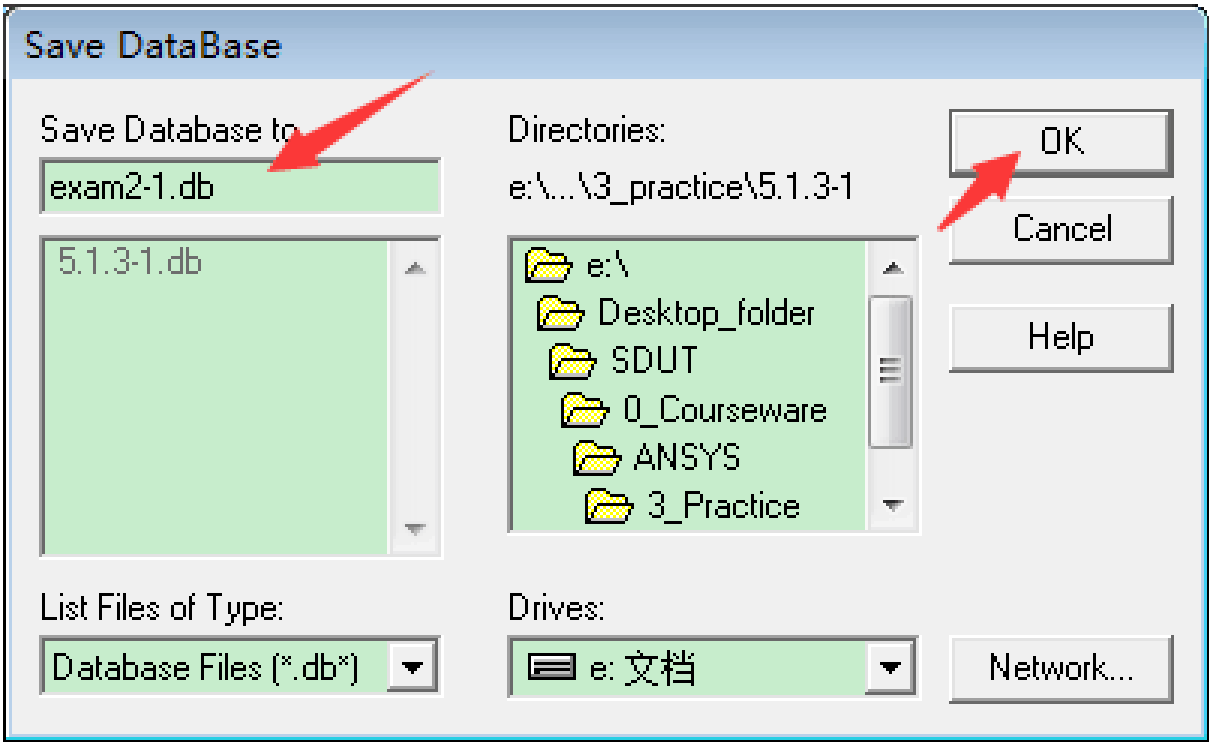
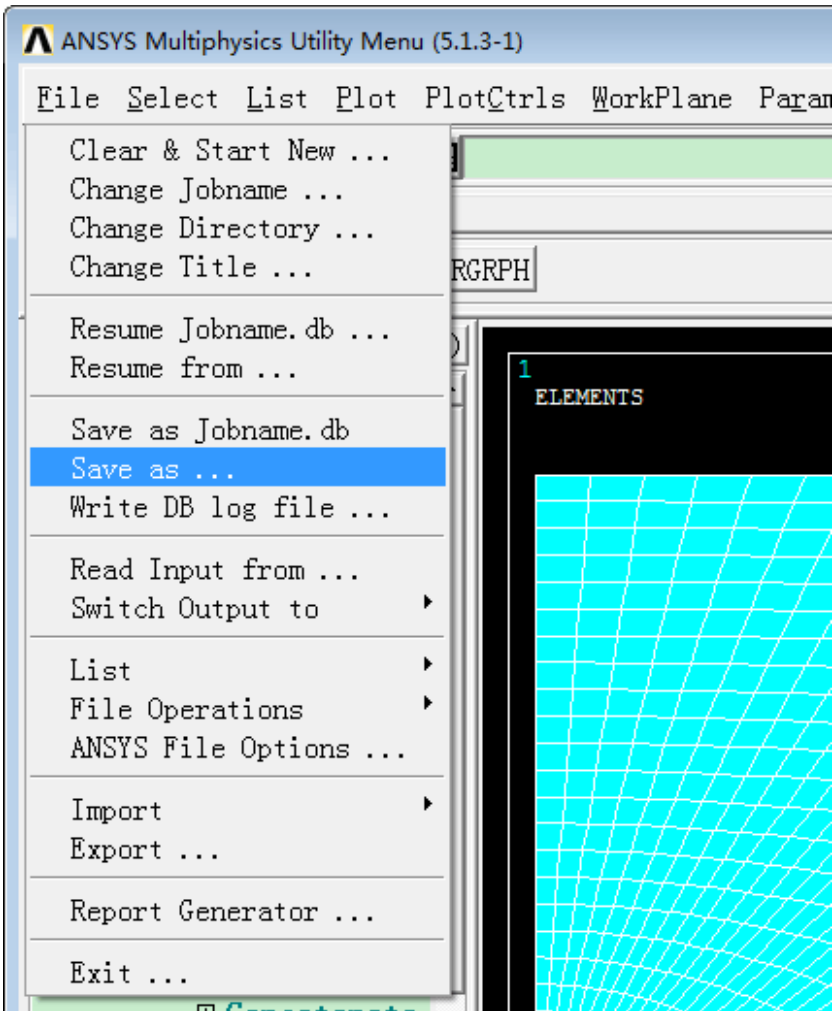


结果如图



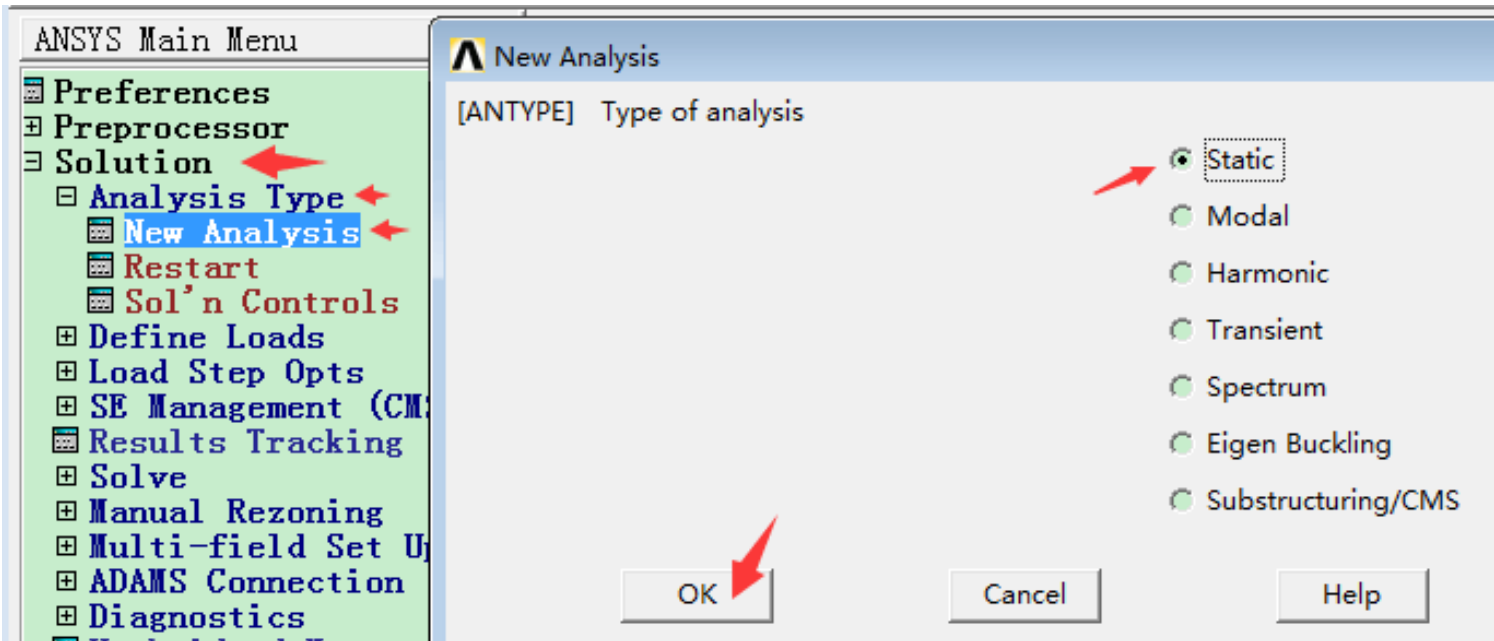
人人好公，则天下太平；人人营私，则天下大乱。——刘鹗

另存为 exam2-1.db。

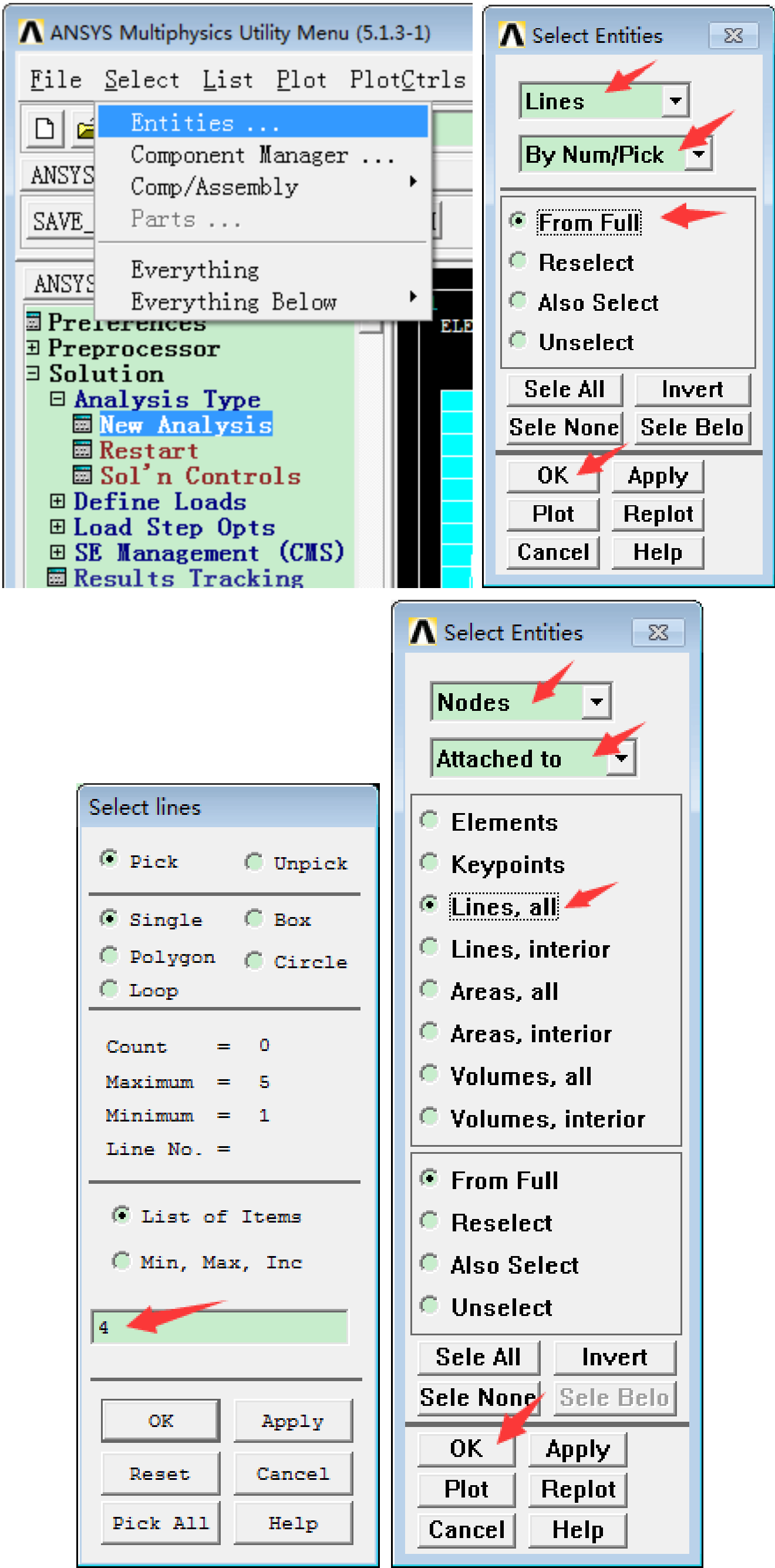


(6) 加载求解

先指定分析类型为静态分析



方向约束



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