## **ANSYS - Orthotropic plate with a hole - Problem Specification**

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## **Problem Specification**

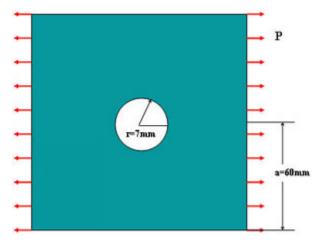
- 1. Create Command Log file
- 2. Modify Log file part1
- 3. Modify Log file part2
- 4. Solve
- 5. Postprocess the results

## **Problem Specification**

Consider the square plate of uniform thickness with a circular hole with dimensions shown in the figure below. The plate is uniaxially loaded with a uniform pressure p=1 MPa. In addition, the plate is made of a Glass/Epoxy composite material with the fibers oriented in same direction as the applied load. The material properties are as follows:

Young's modulus in the fiber direction Ex = 59.3 GPa Young's modulus in the transverse direction Ey = 22 GPa In-plane shear modulus Gxy = 8.96 GPa Major Poisson's ratio  $n_{xy} = 0.26$  Minor Poisson's ratio  $n_{vx} = 0.047$ 

The circumferential stress concentration on the boundary of the hole is to be determined using ANSYS.



Go to Step 1: Create Command Log file

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