Q: How to calculate the sound pressure distribution at a point away from a sound source?
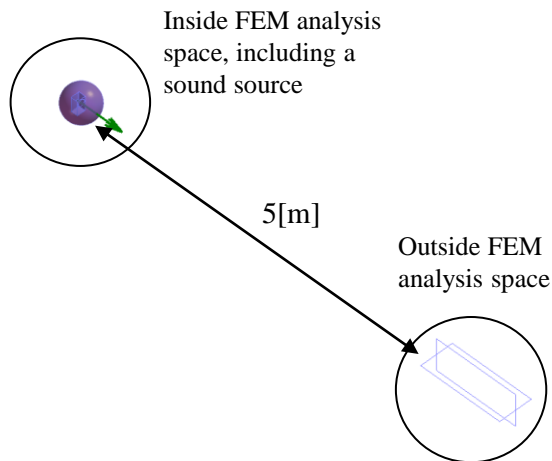
A: The sound pressure will decrease in inverse proportion to the distance, R, from the sound source. This characteristic allows you to calculate the sound pressure at a point away from the source with methods other than the finite element method (FEM), without requiring meshing the overall space.
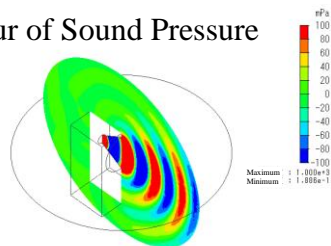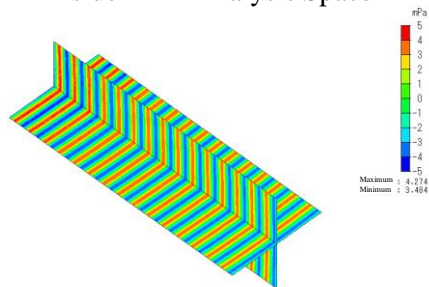
Please refer to the next slide.

Analysis Setting

- 3D analysis, calculation of sound pressure at a point, 5 m away at 1 kHz.
- Use Huygens' principle for the calculation outside the FEM analysis space.
- For the body attribute of the body outside the FEM analysis space, select [Use the directivity calculation method] on the [Analysis Domain] tab.

Inside FEM analysis space, including a sound source

5[m]

Outside FEM analysis space

Contour of Sound Pressure

Inside FEM Analysis Space

Outside FEM Analysis Space