

# ANSYS AIM - Stress Due to Gravity

Author(s): Joshua Wallace, ANSYS

## Problem Specification

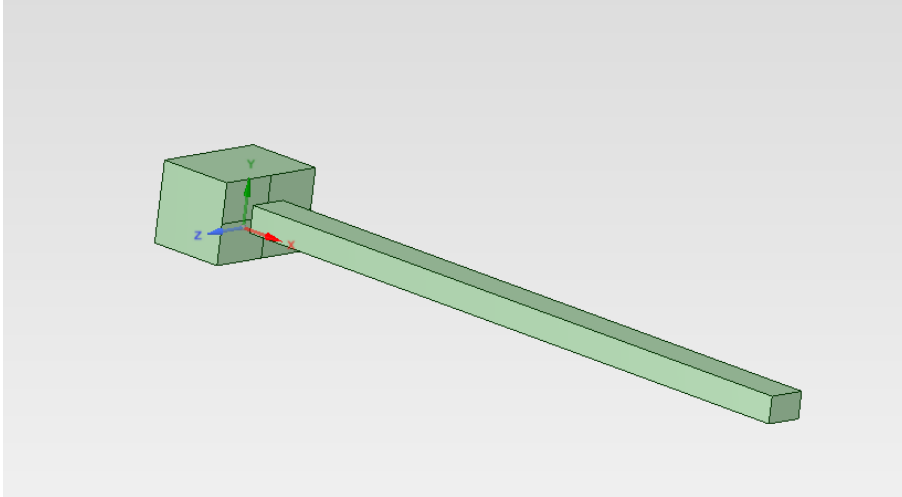
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## Stress Due to Gravity

Created using ANSYS AIM 17.1

### Problem Specification

Consider the geometry in the figure below. The slender bar is 3 inches wide, 2 inches tall, and 50 inches long. The large block on the end of the bar is 9 inches wide, 6 inches tall, and 6 inches long. Both are made of structural steel with a Young's modulus of  $2.90075 \times 10^7$  and a poisson's ratio of .3. The left end of the bar is fixed to a wall, and the geometry is subjected to standard earth gravity. Calculate the maximum equivalent stress in the geometry.



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