

ANSYS AIM - Stress Due to Gravity

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Problem Specification

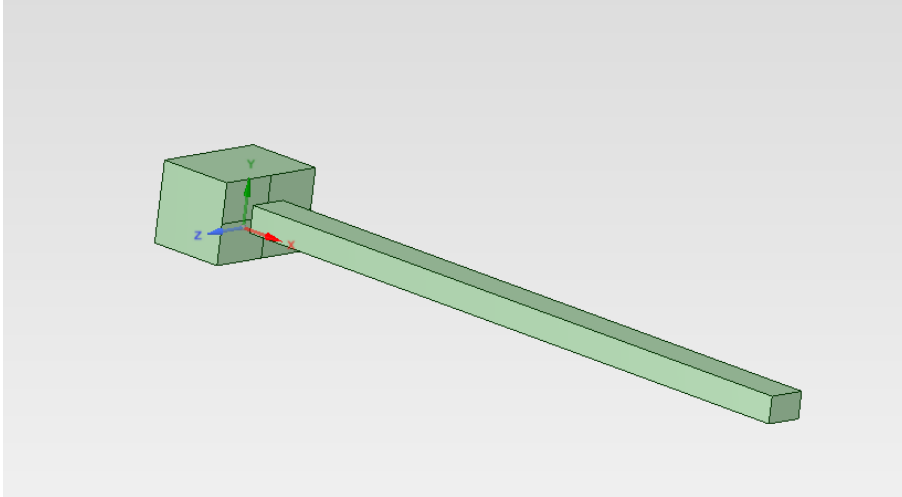
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Stress Due to Gravity

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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 2.90075×10^7 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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