

Activity 5.2b - Moment of Inertia Activity with MDSolids

Purpose

This activity will introduce the concept of using computer software to calculate moment of inertia. Moment of inertia, as it is used here, will allow us to compare different cross sectional areas of a structural member and analyze how the shape of a beam affects its stiffness.

Equipment

MDSolids program
Pencil
Paper

Procedure

Using MDSolids, complete the following table for a beam loaded as shown in the figure below. Start with a beam with a rectangular cross section (2" x 4") made from Douglas Fir. Investigate the effects of changing the shape of the cross section and not exceeding the overall cross section size of the 2x4.



