



Ftool

Tutorial for creation and analysis of a plane truss and result visualization

Version 4.00

January 2018

<http://www.ftool.com.br>

This tutorial:

<http://www.tecgraf.puc-rio.br/ftool/downloads/tutorialtruss.zip>

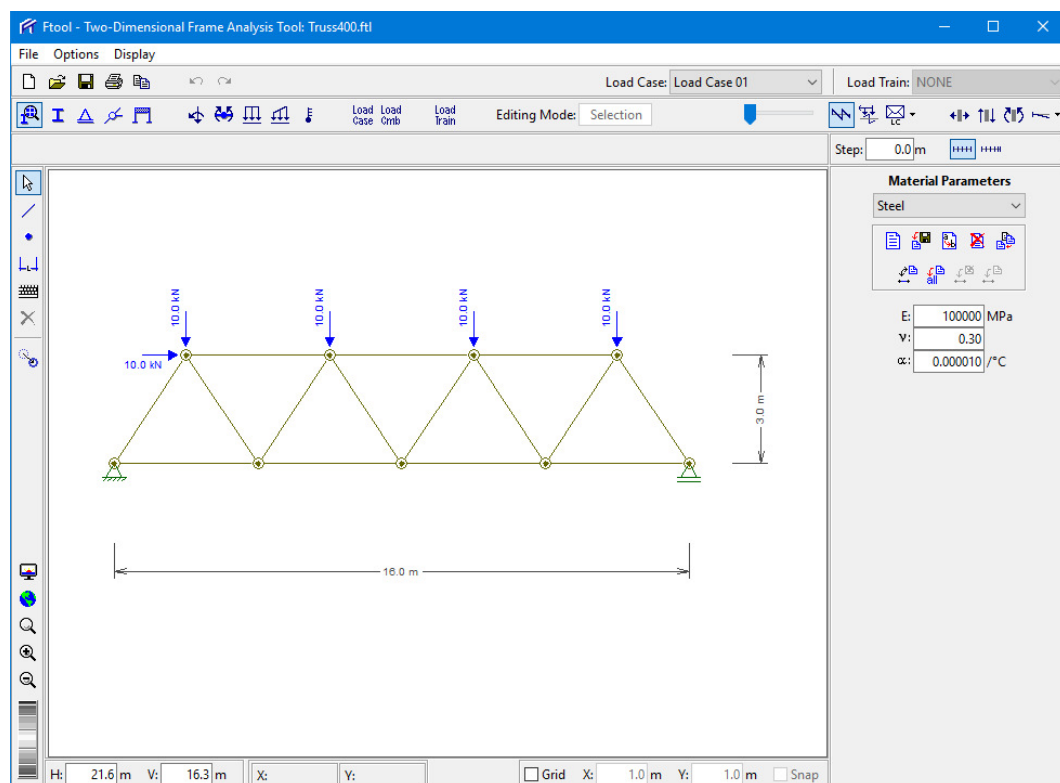
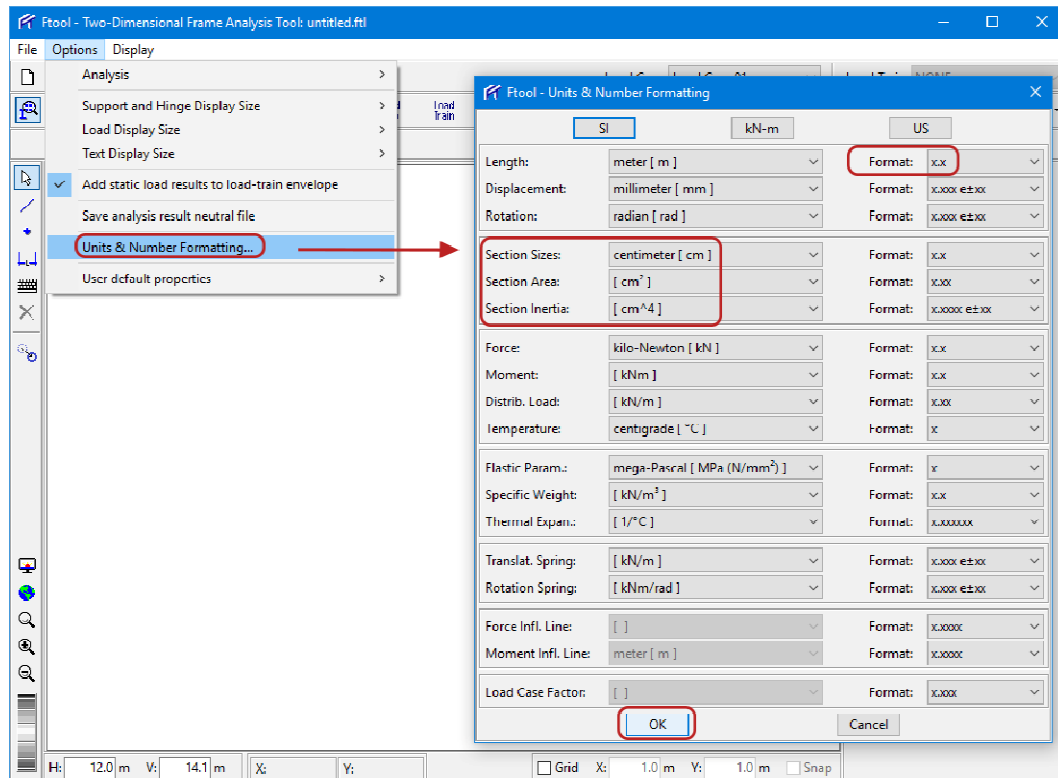




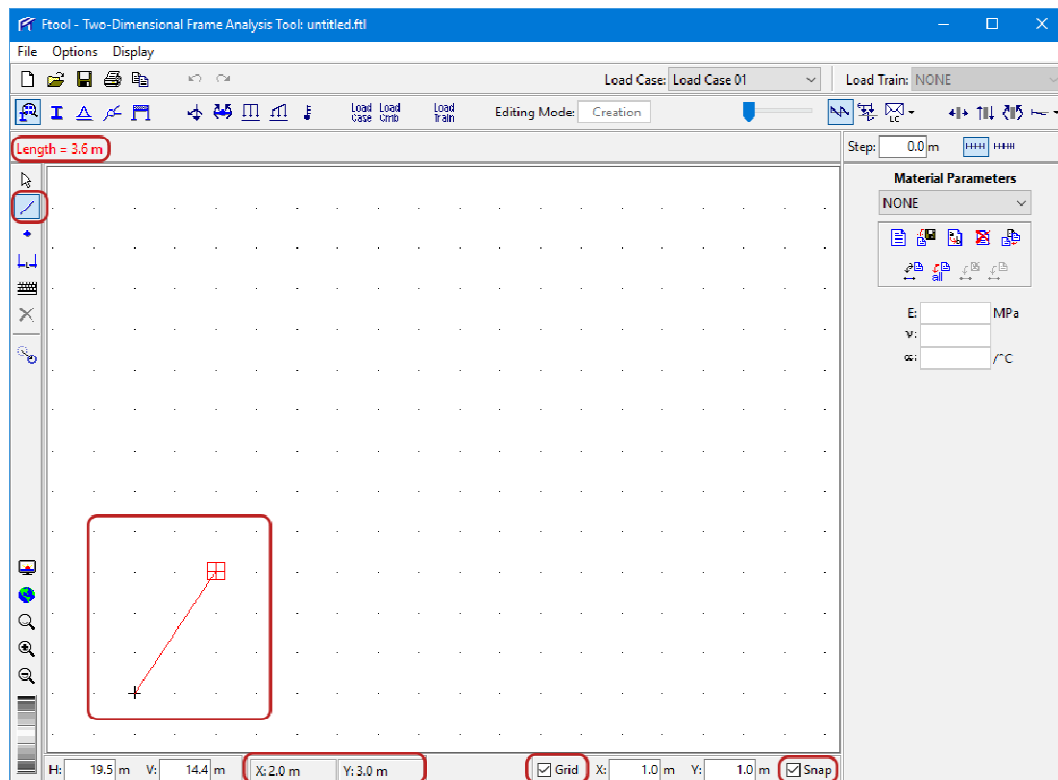
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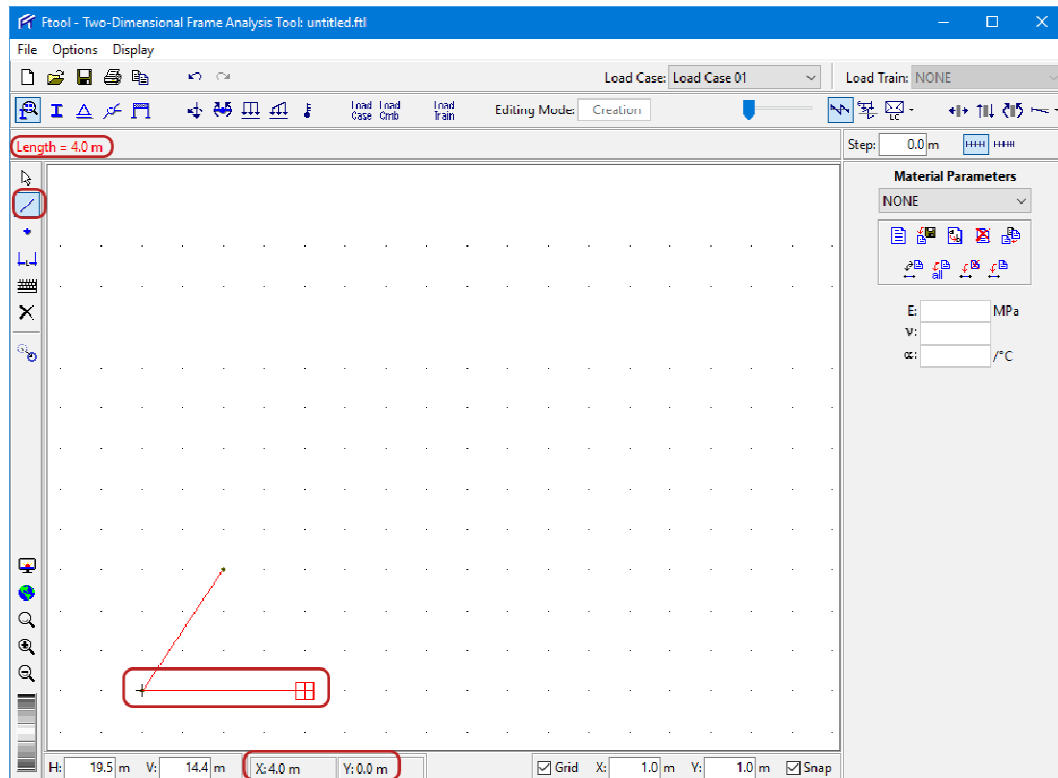
Specification of units and number formatting



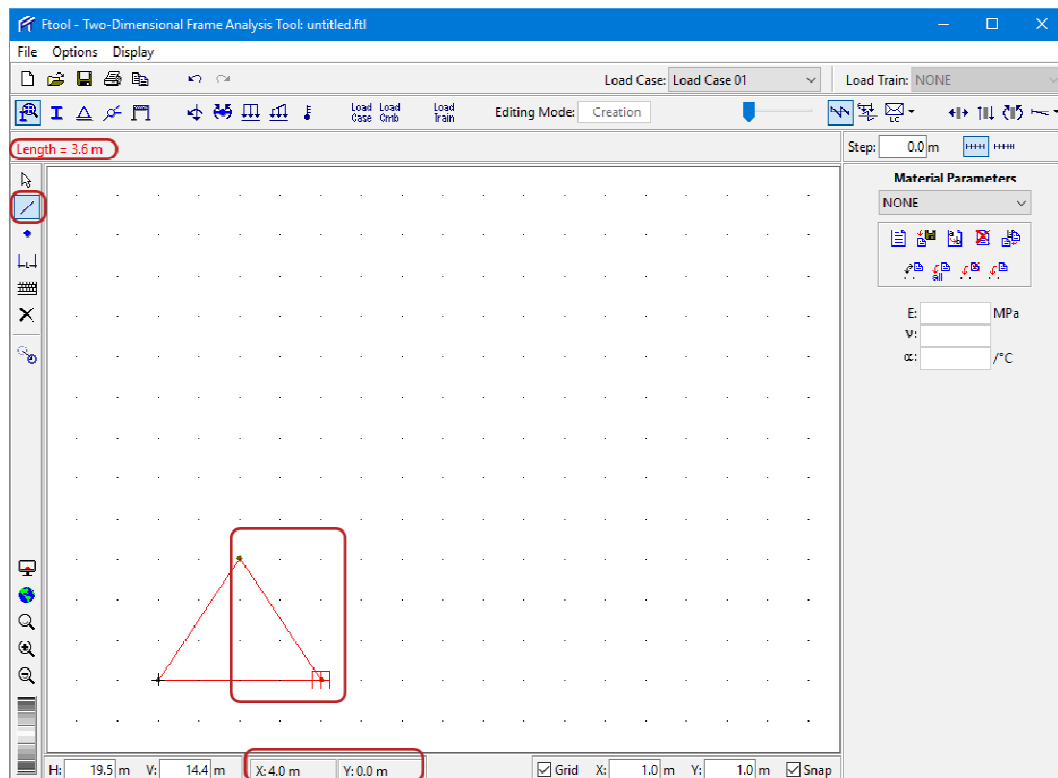
Grid of coordinates and grid point spacing with attraction (*snap*); insertion of first member



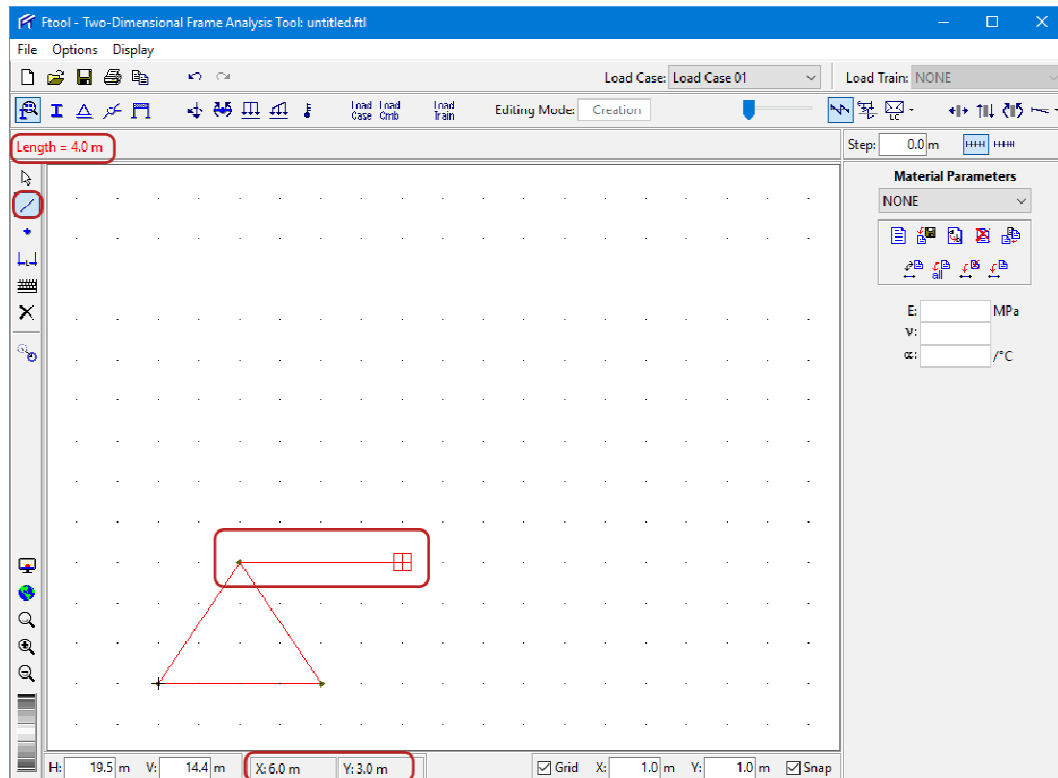
Insertion of second member



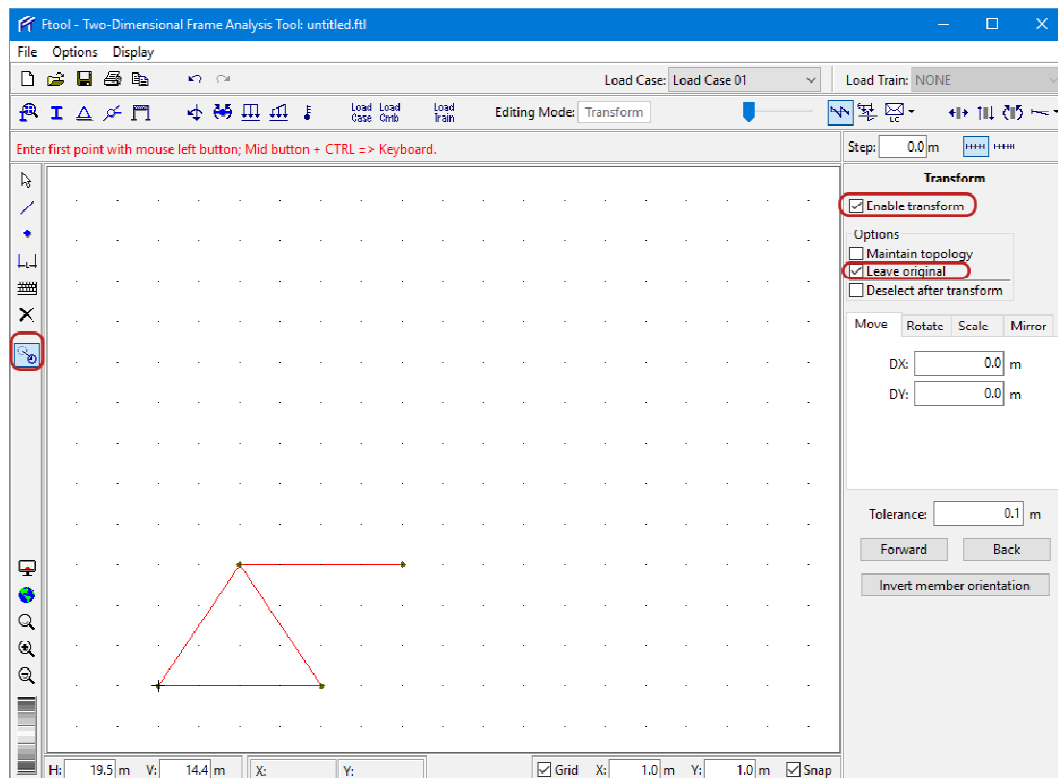
Insertion of third member



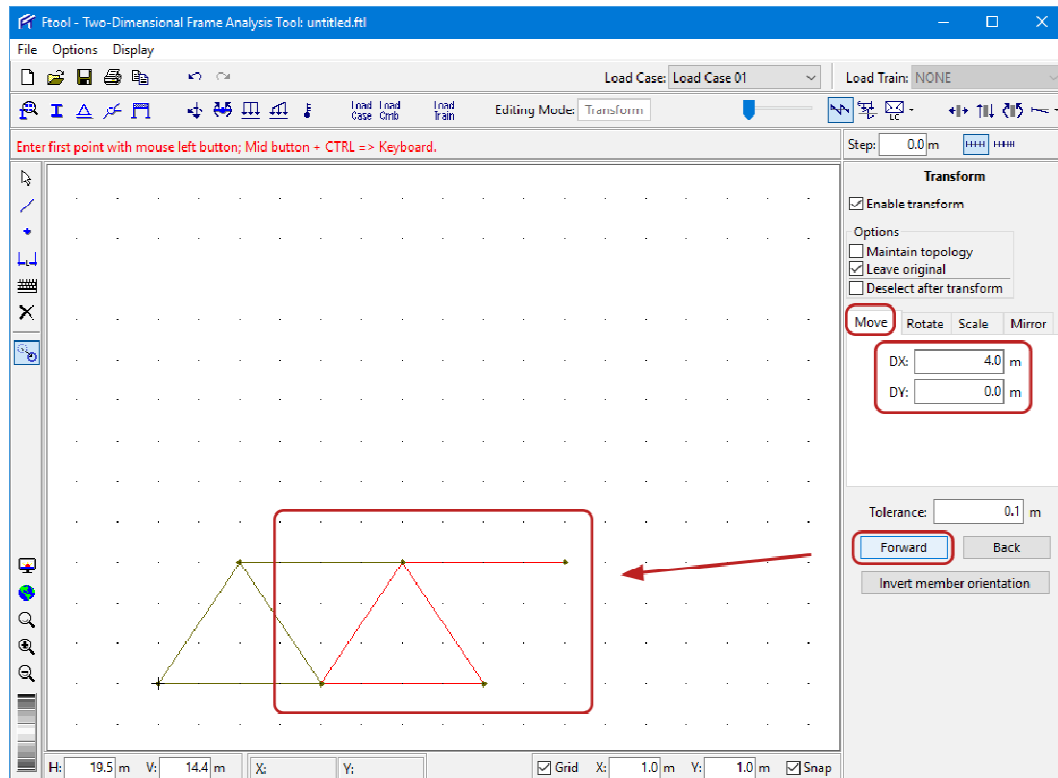
Insertion of fourth member



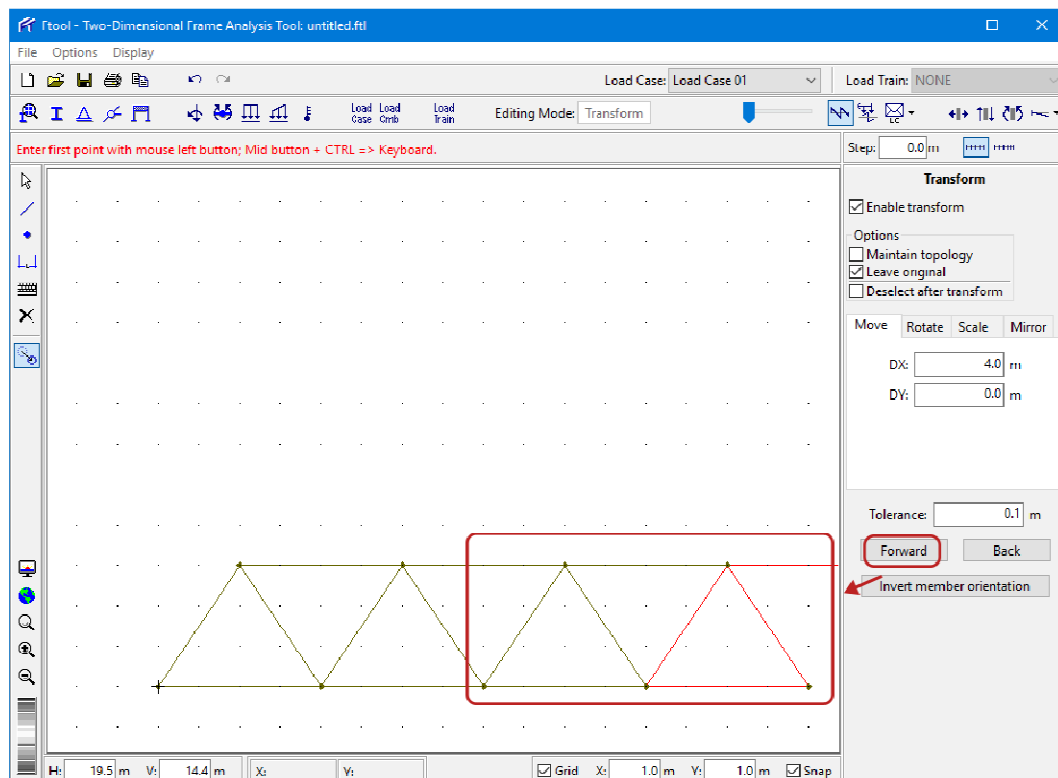
Selection transform operation with copy (*Leave Original*)



Translation operation (*Move*), with copy (*Leave Original*), in keyboard mode

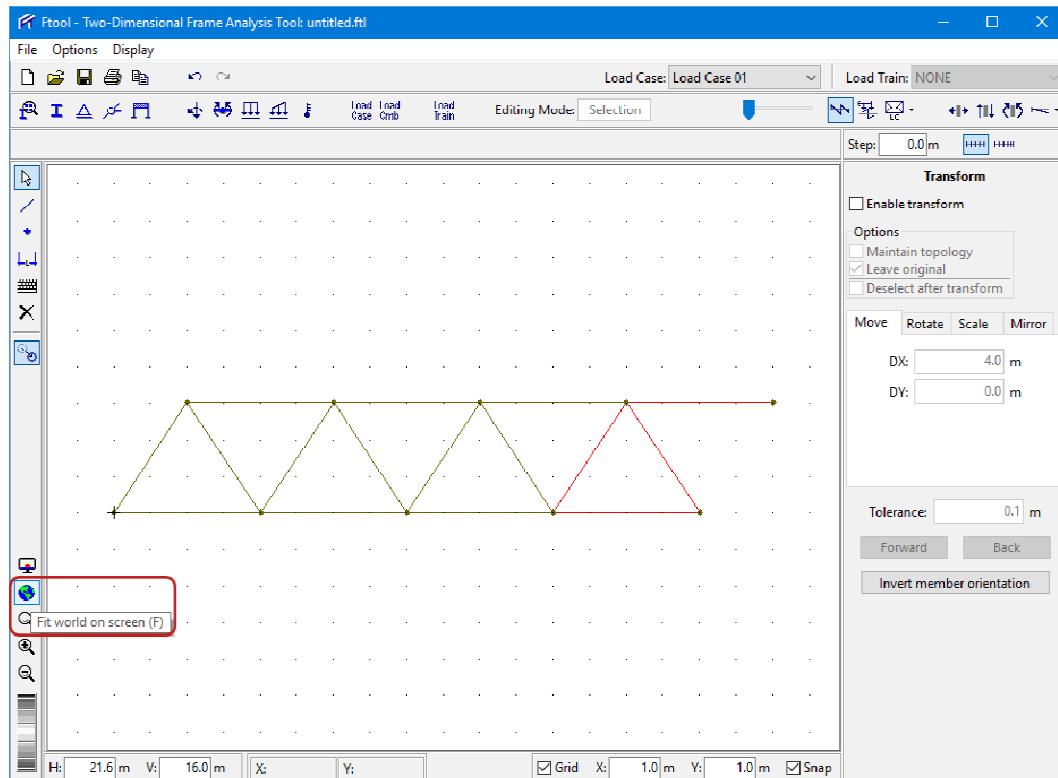


Repeat translation (*Move*) operation with copy (*Leave Original*) twice

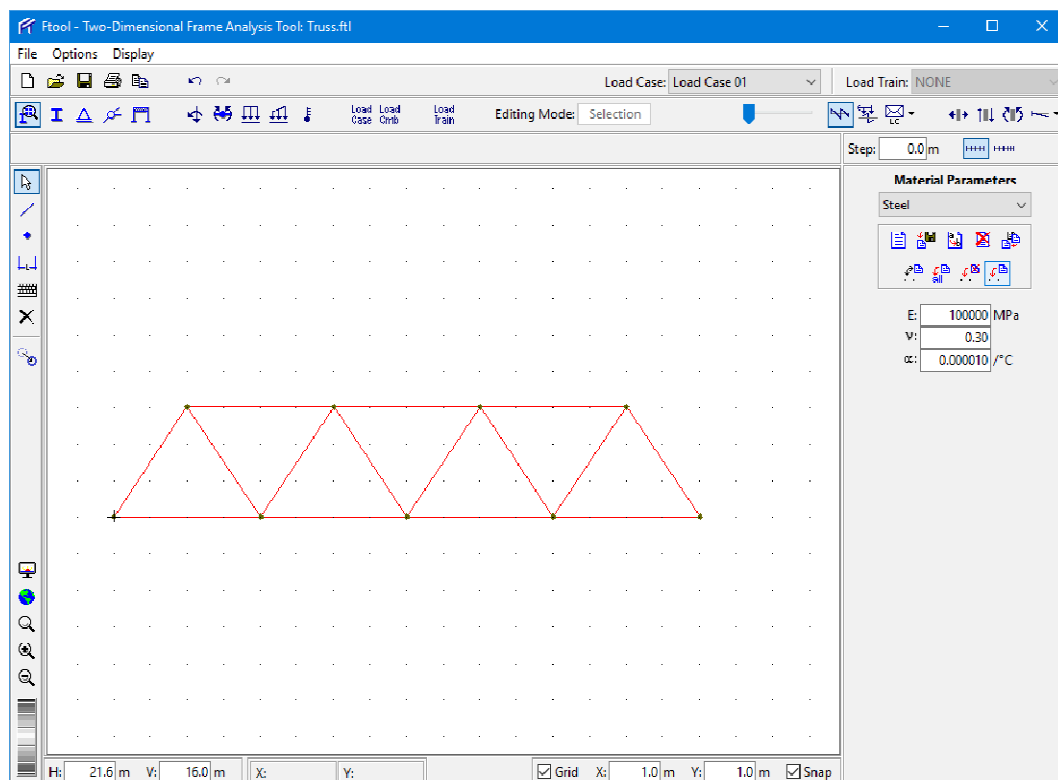




Fit image of entire model on screen

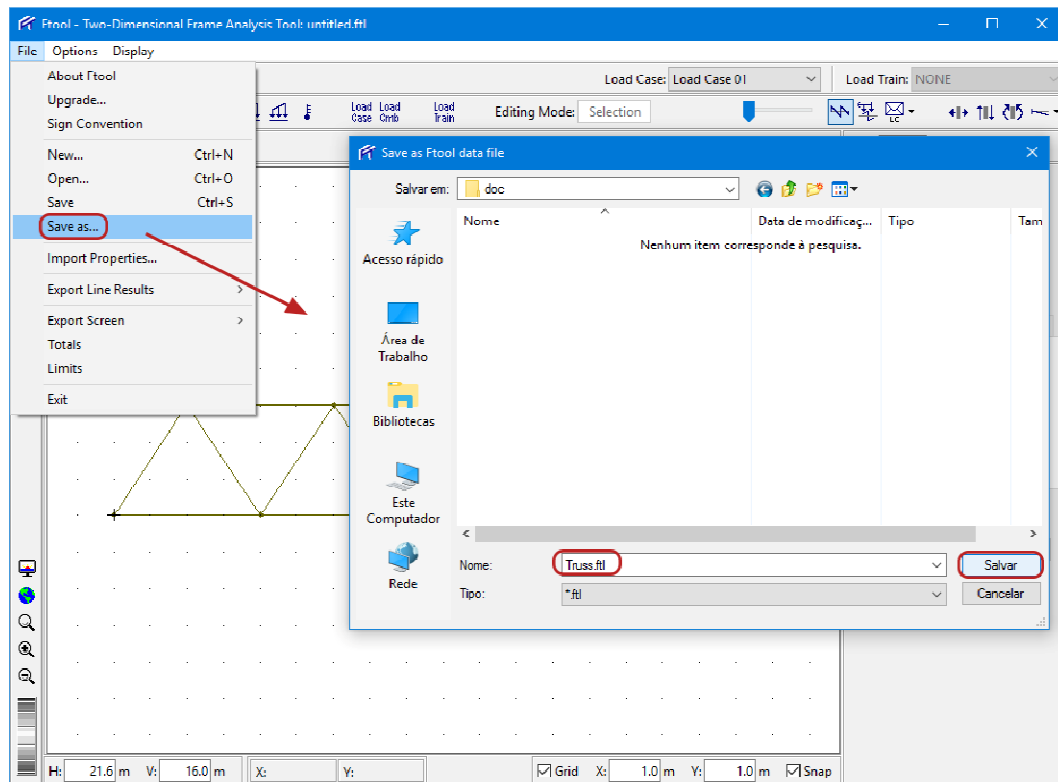


Delete dangling member remaining for last move-with-copy operation

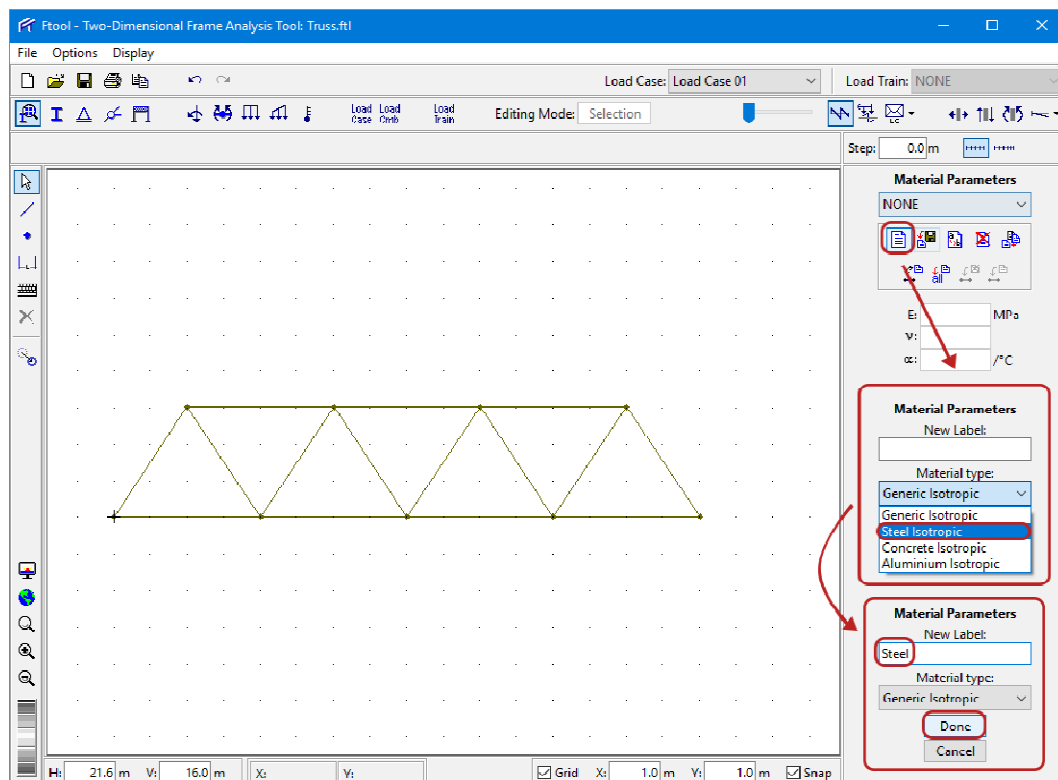




Create a file for truss model (command "Save as... ")

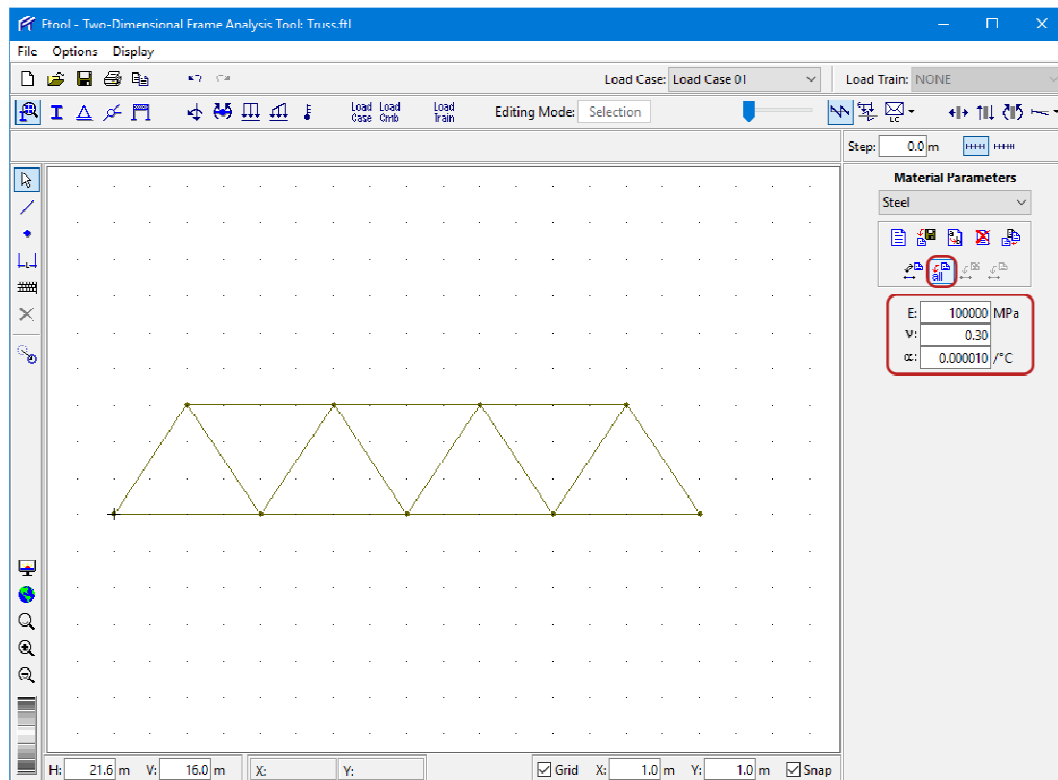


Creation of new material, selecting its type and name

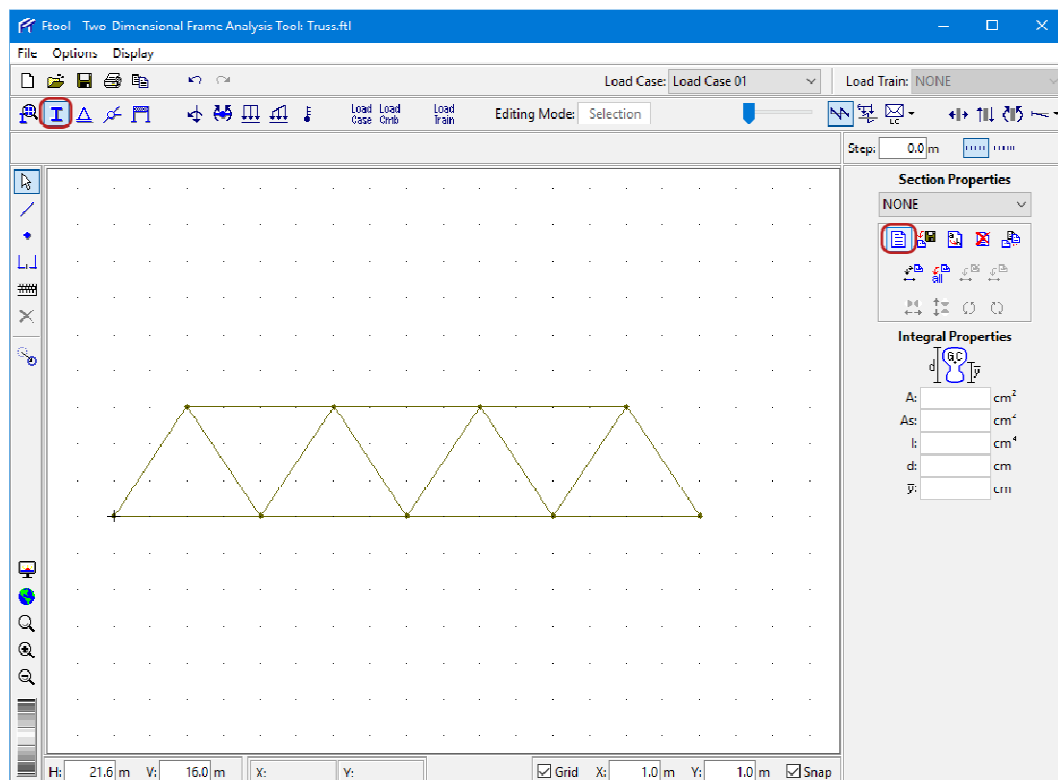




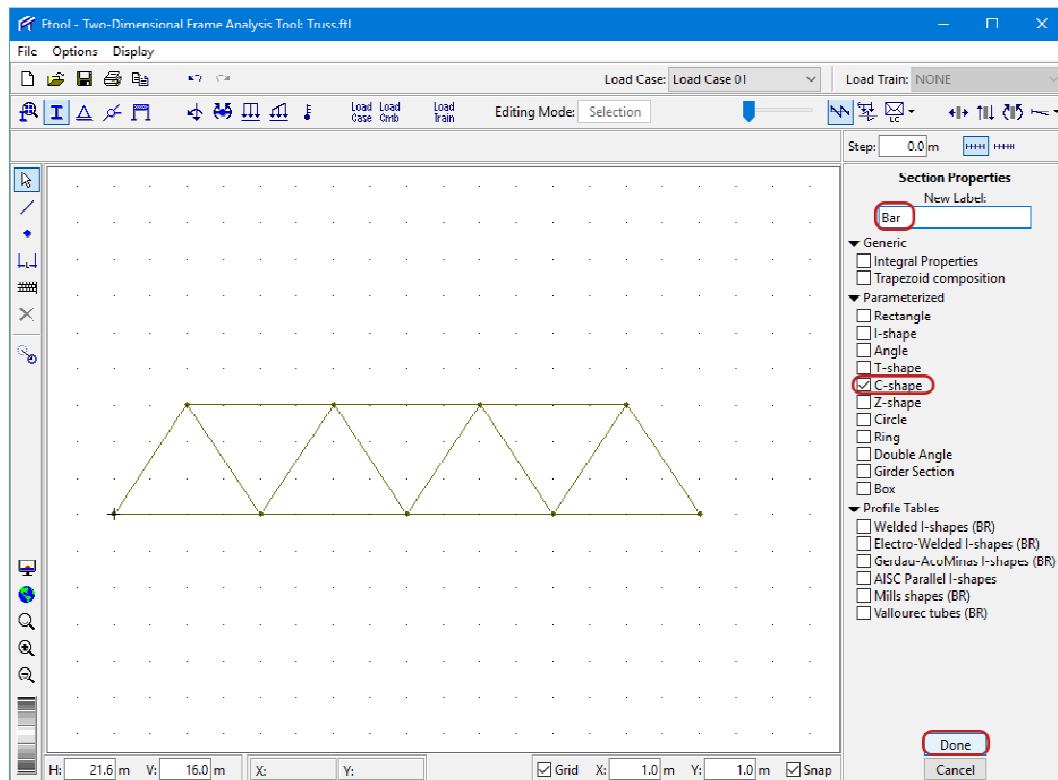
Assignment of created material to all selected members



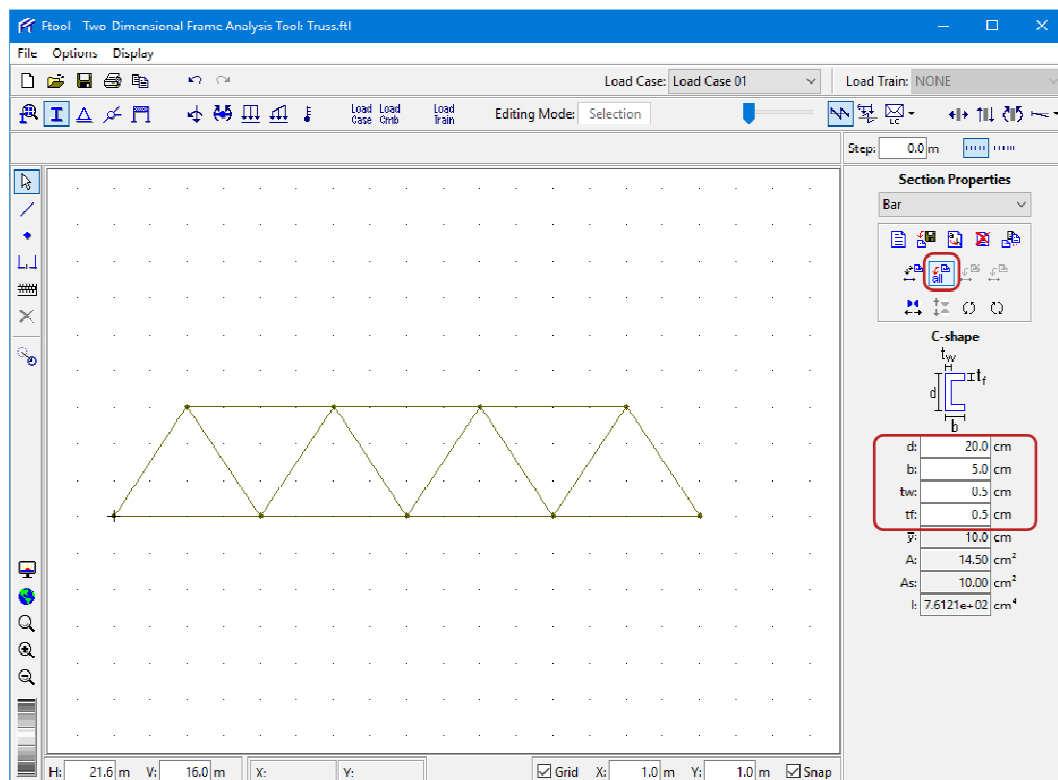
Creation of new cross-section for all members



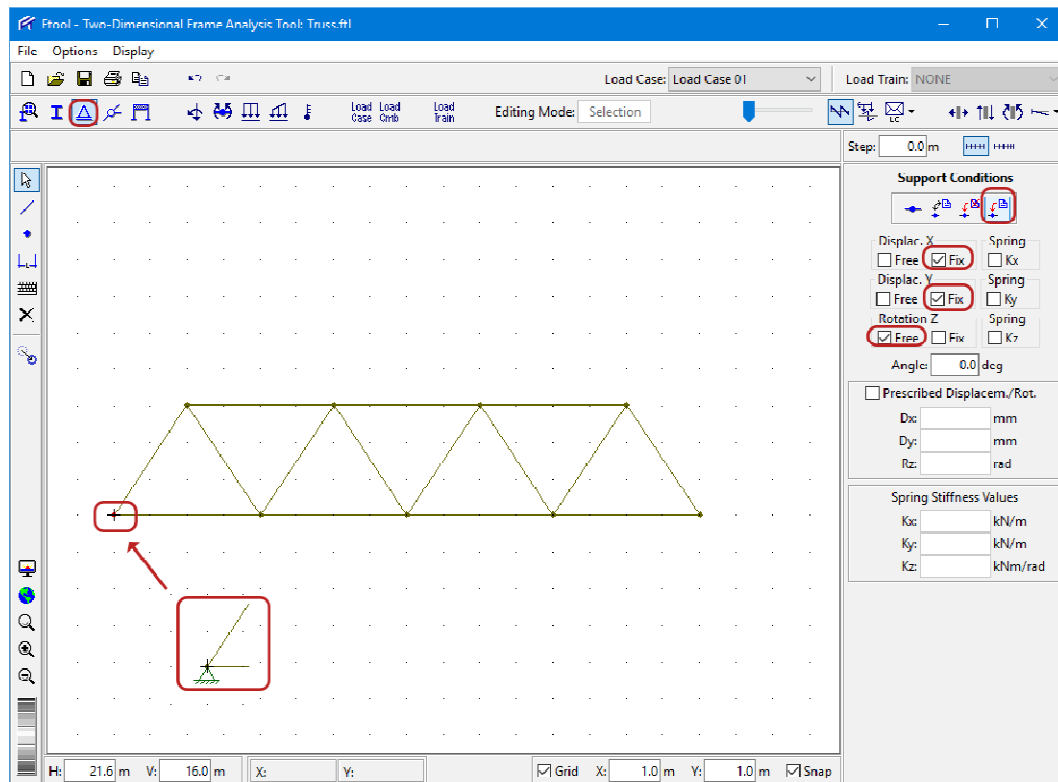
Selection of C-shape cross-section type for all members



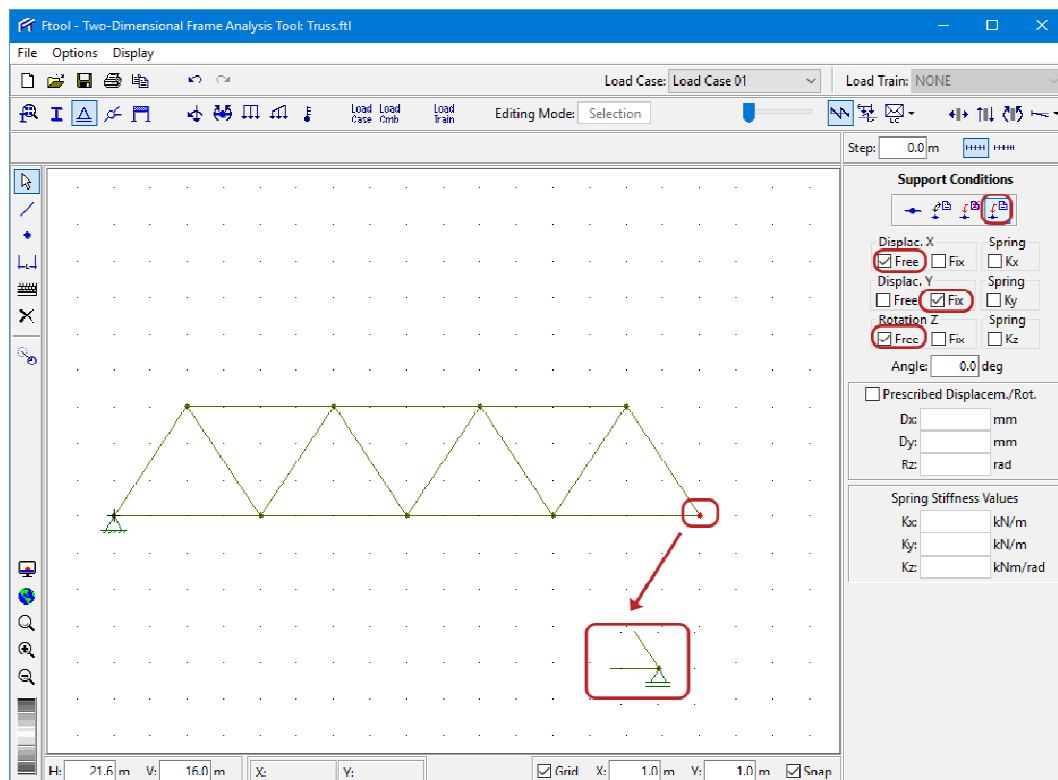
Definition of cross-section dimensions and assignment to all members



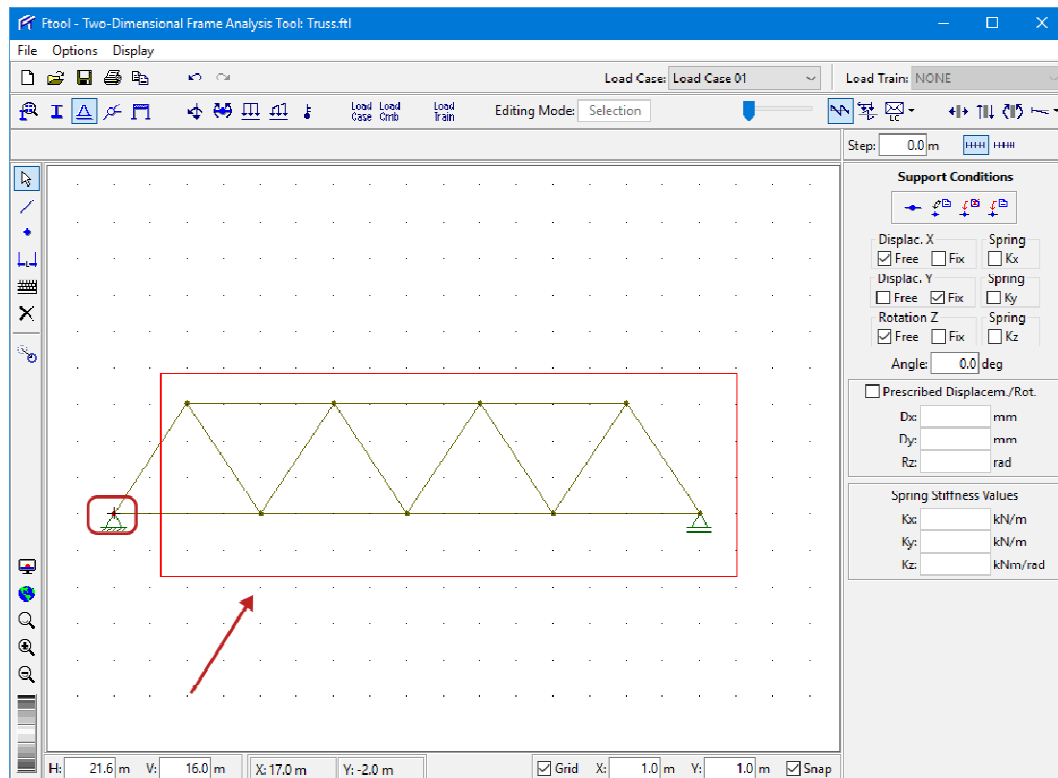
Definition of a pin support and assignment to left inferior node



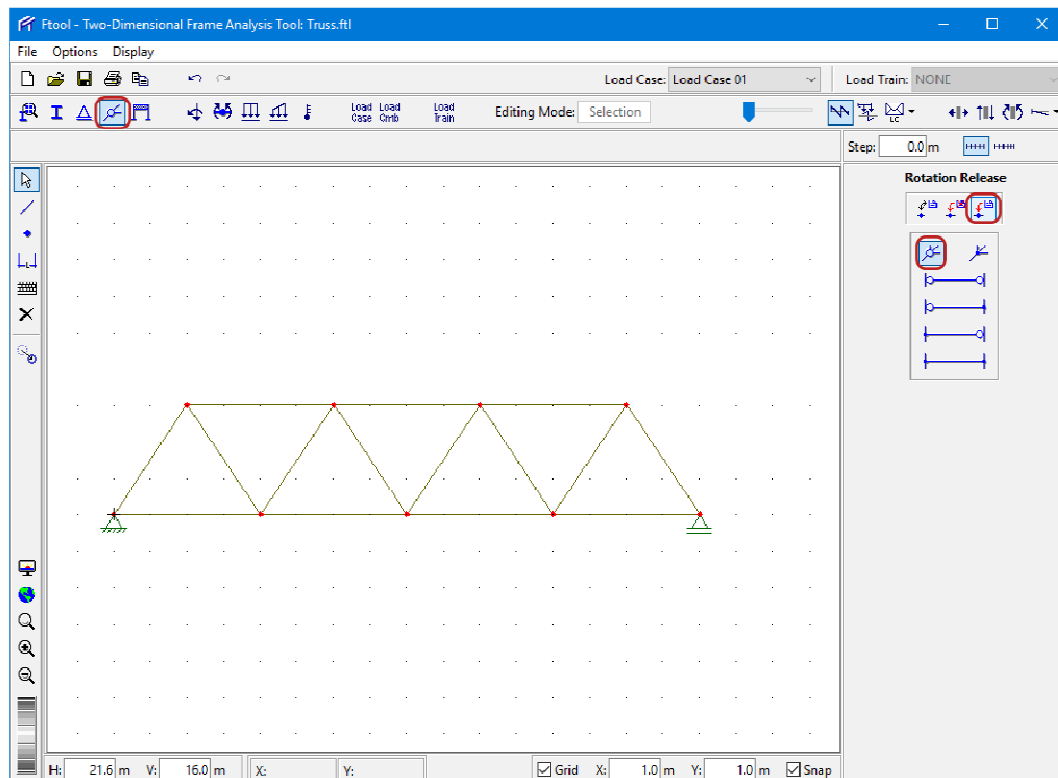
Definition of a simple support and assignment to right inferior node



Selection of a single node followed by selection of all nodes through a rectangular fence using the mouse (with *Shift* key)

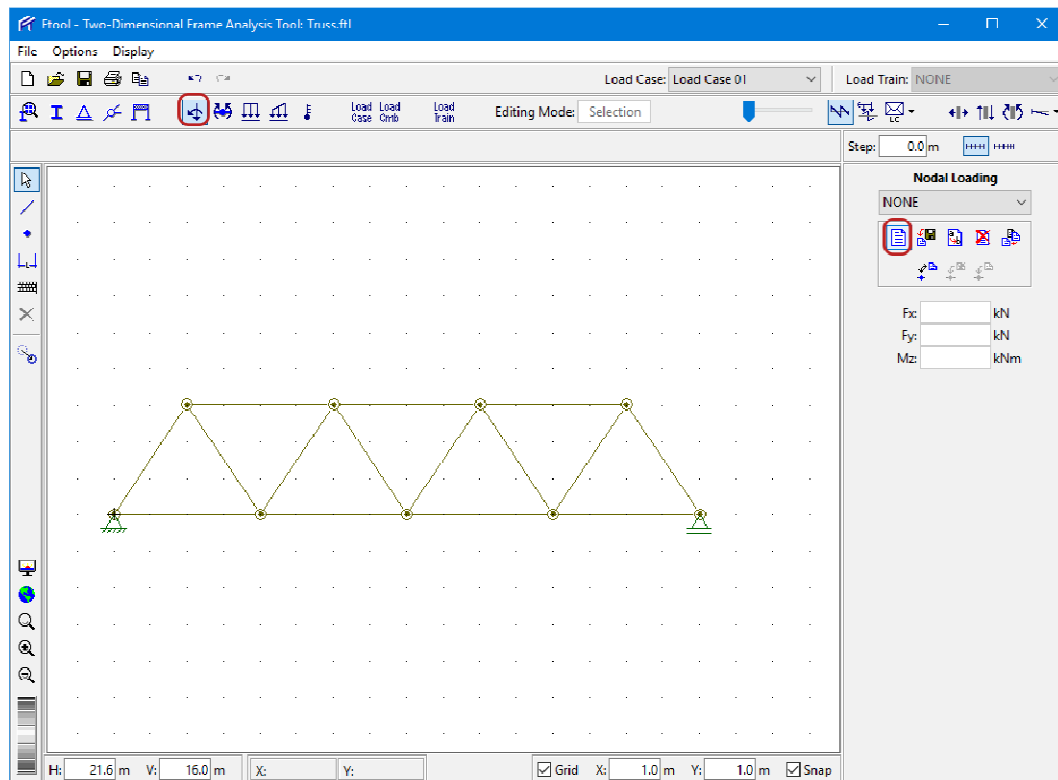


Application of a complete hinge to all selected nodes

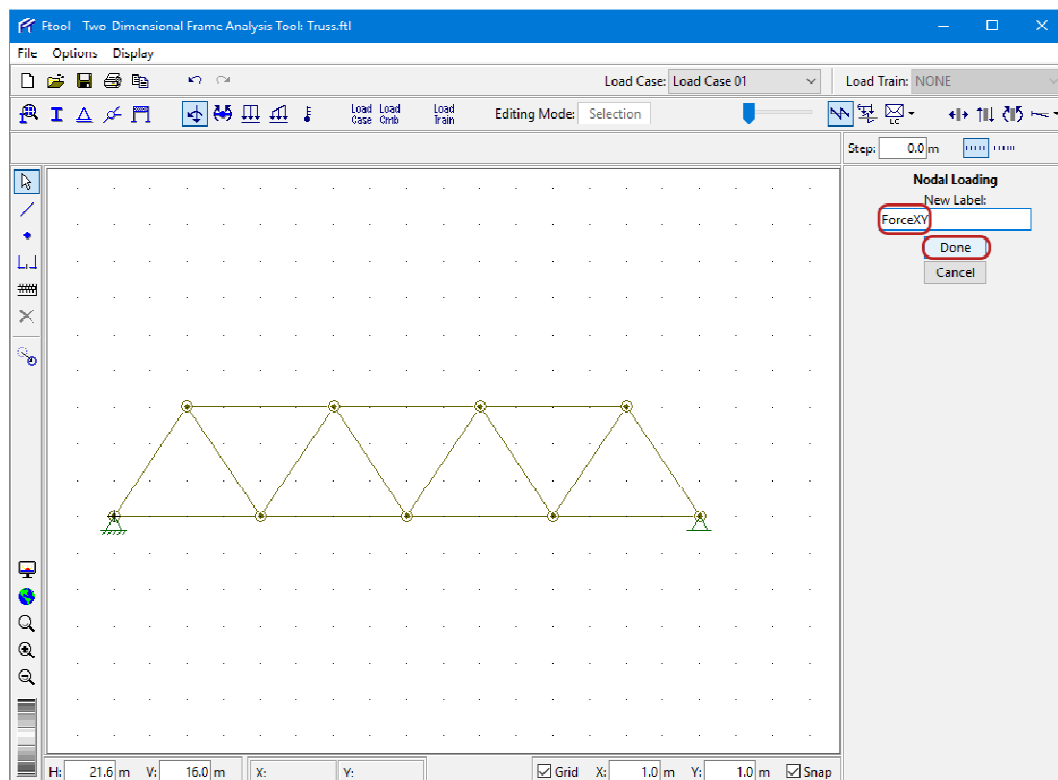




Creation of a concentrated force load for left superior node



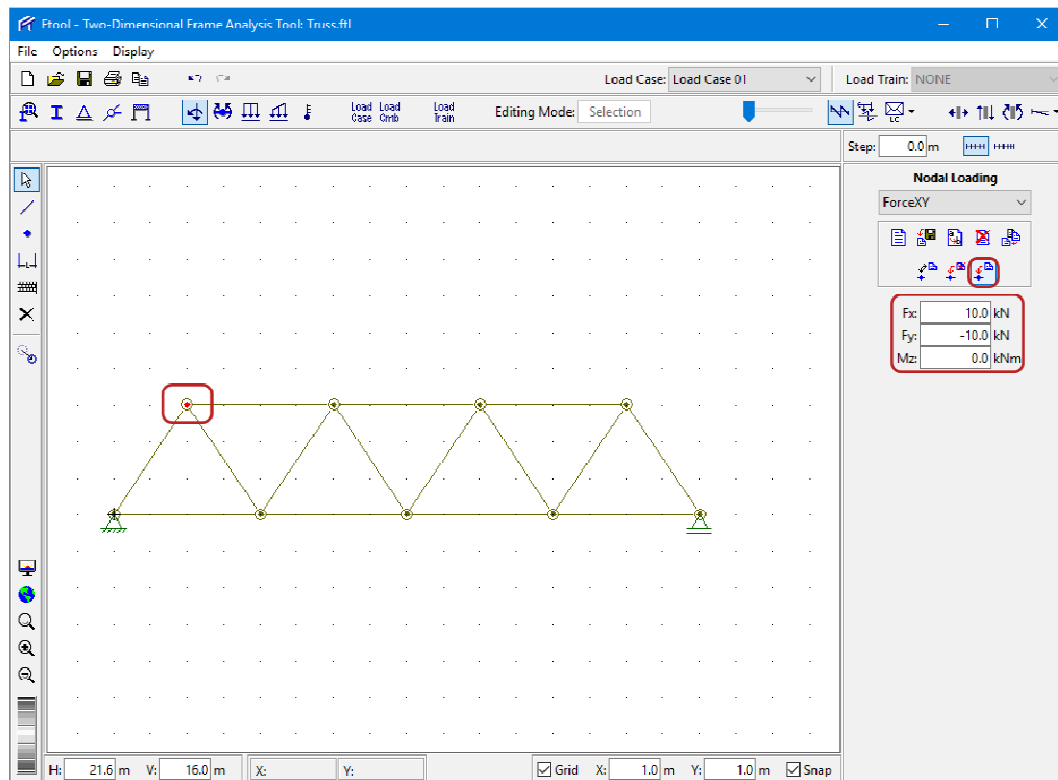
Definition of name of concentrated force load at left superior node



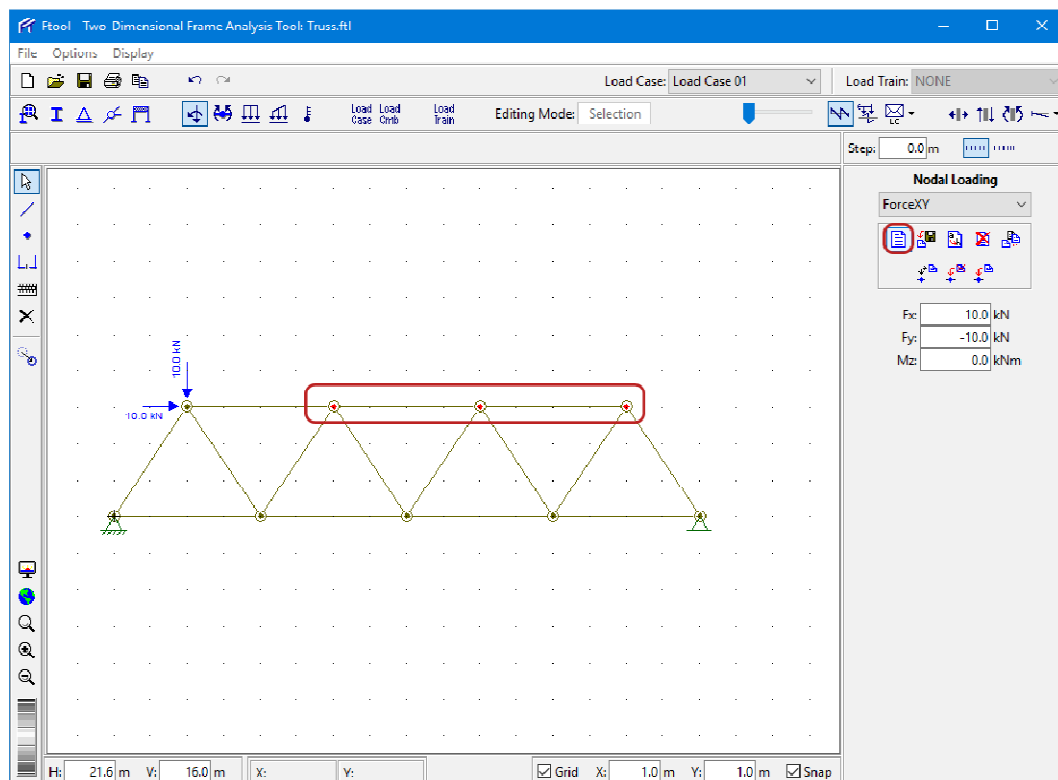
Definition of X and Y component values of concentrated force load and



application to left superior node

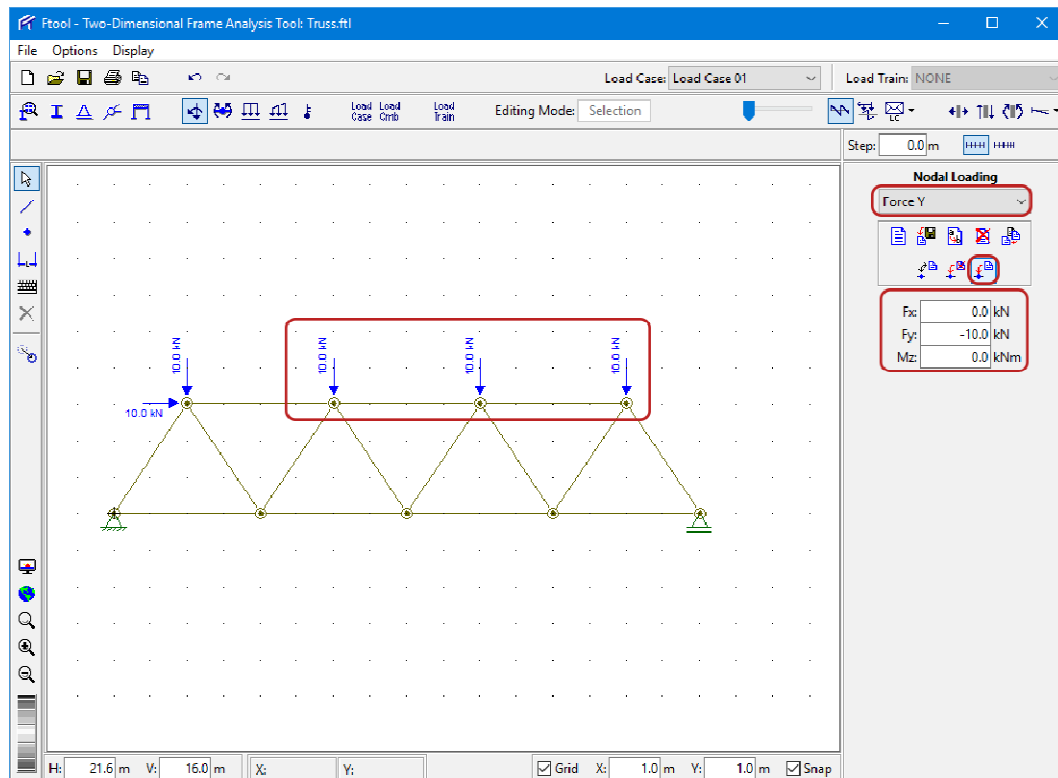


Creation of concentrated force load for the other superior nodes

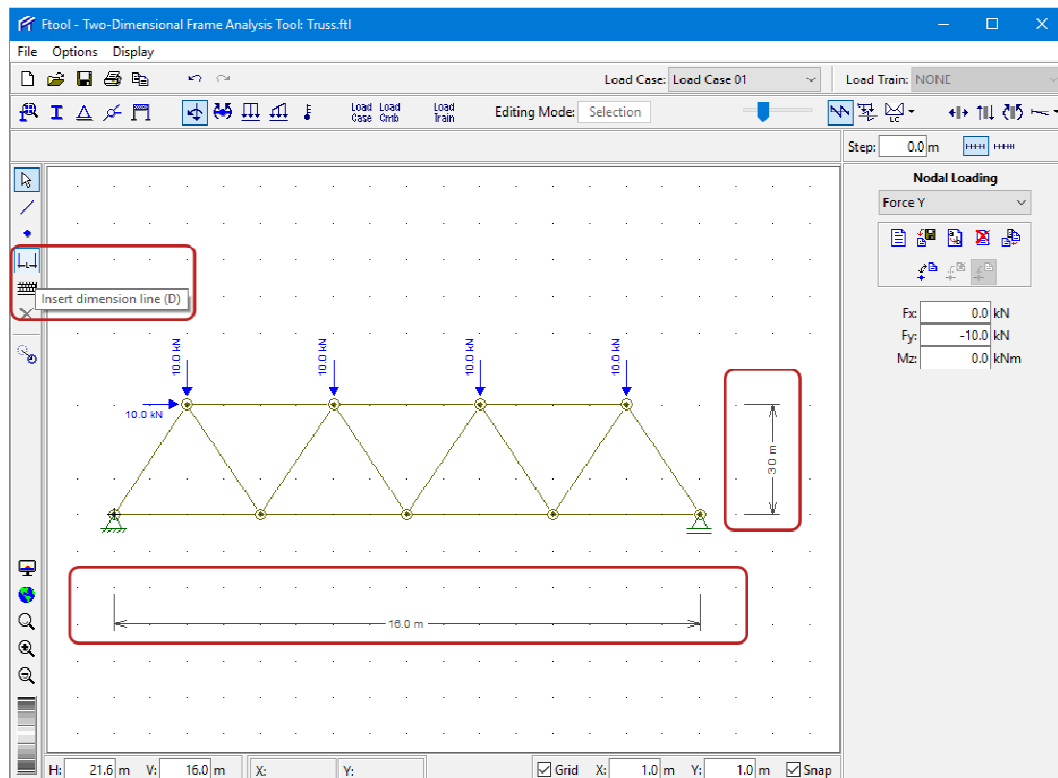




Definition of name and Y component value of concentrated force load and application to other superior nodes

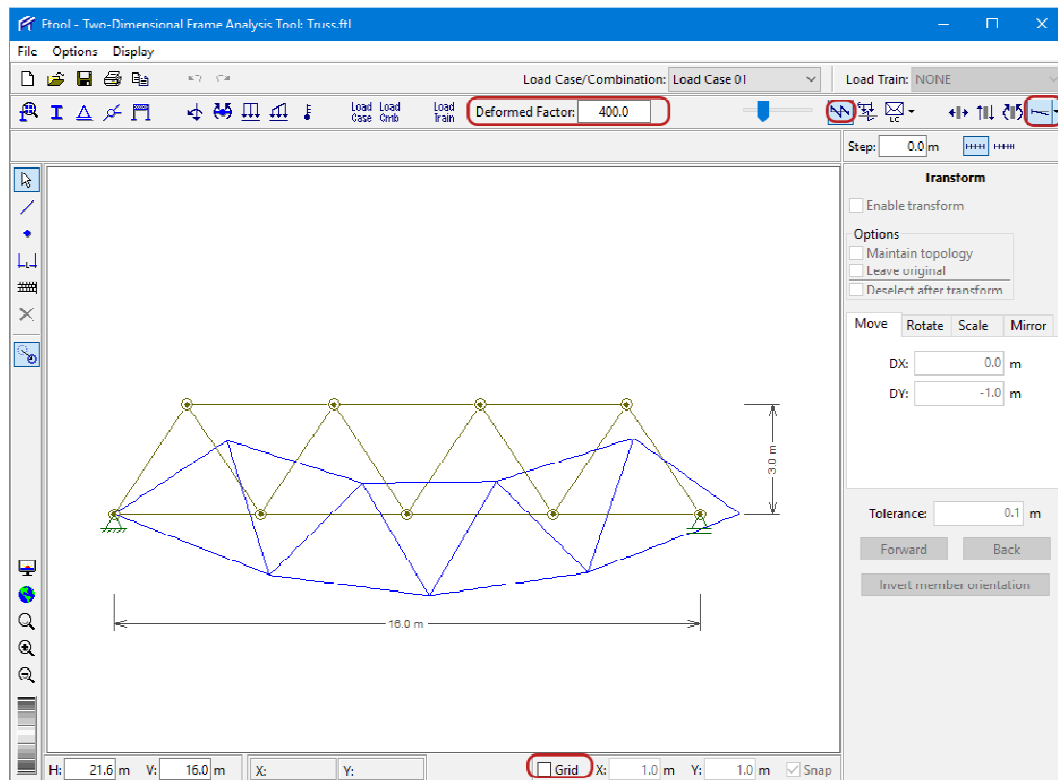


Creation of dimension lines to indicate model global dimensions

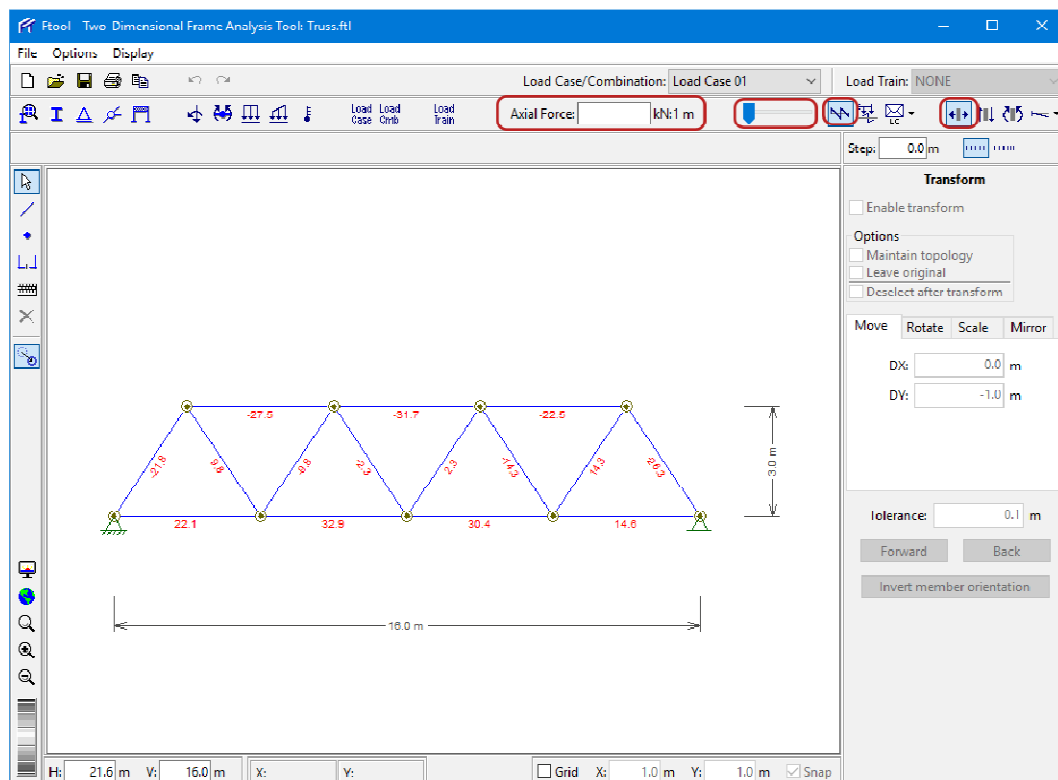




Visualization of model deformed configuration response



Visualization of axial force result in truss members





Visualization of support reactions

