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

Version 4.01
June 2024
http://www.ftool.com.br

This tutorial:
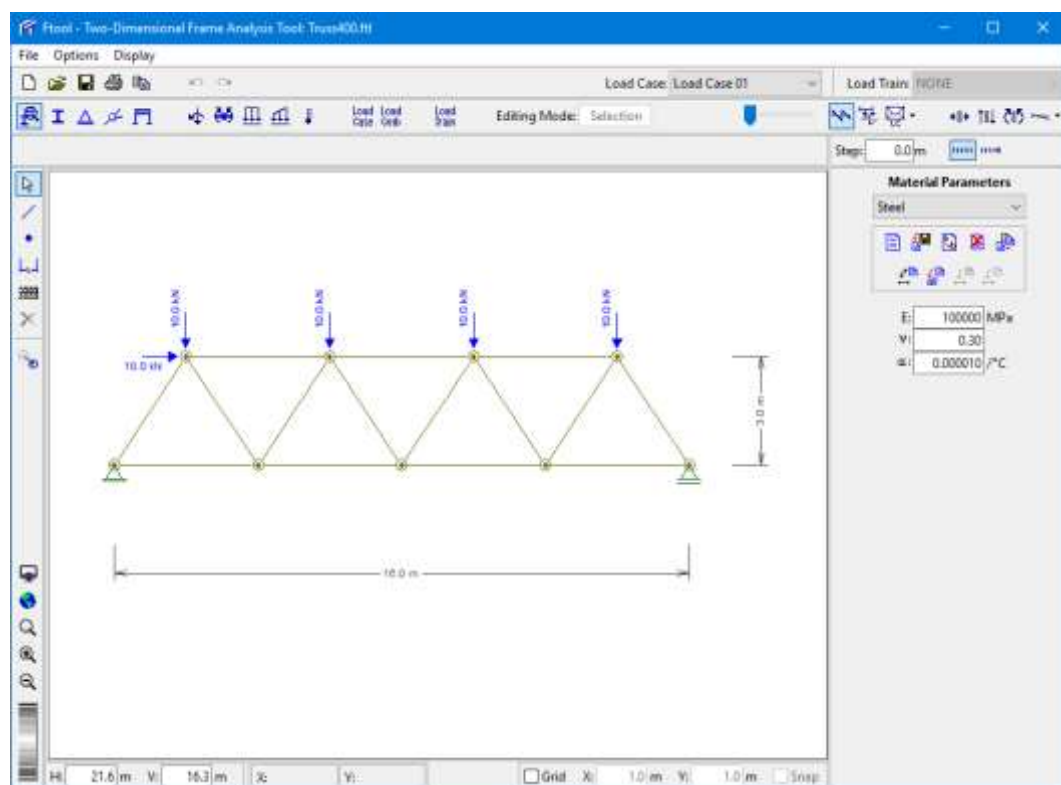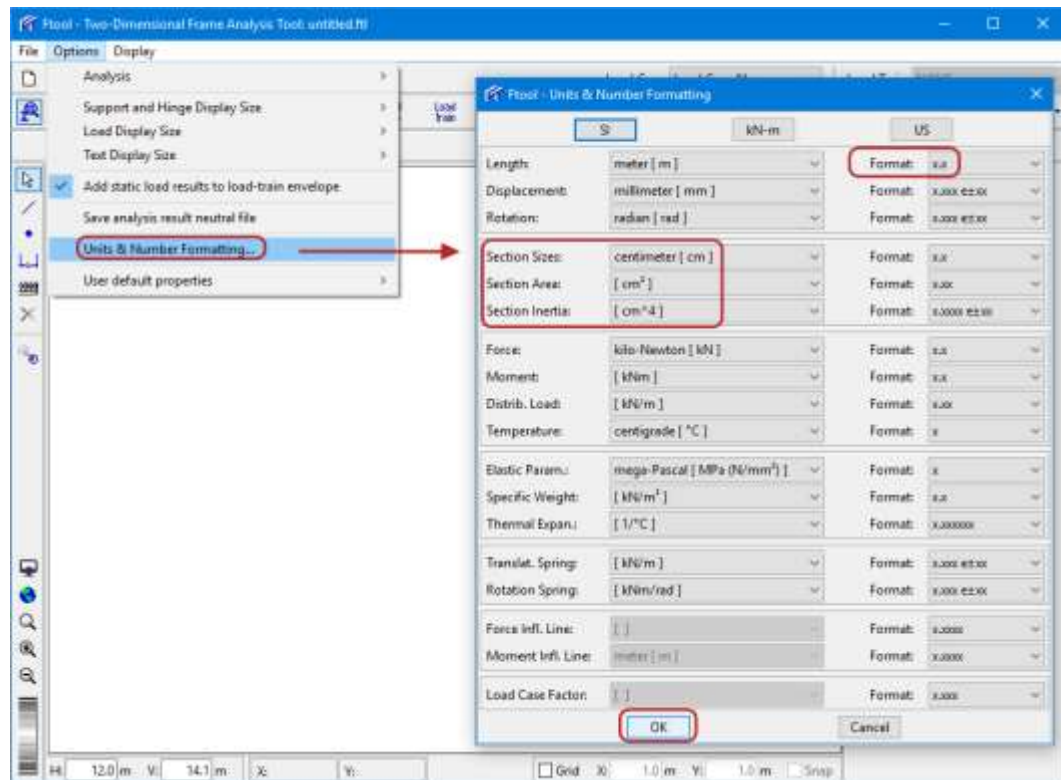https://www.tecgraf.puc-rio.br/ftool/downloads/tutorialtruss.zip
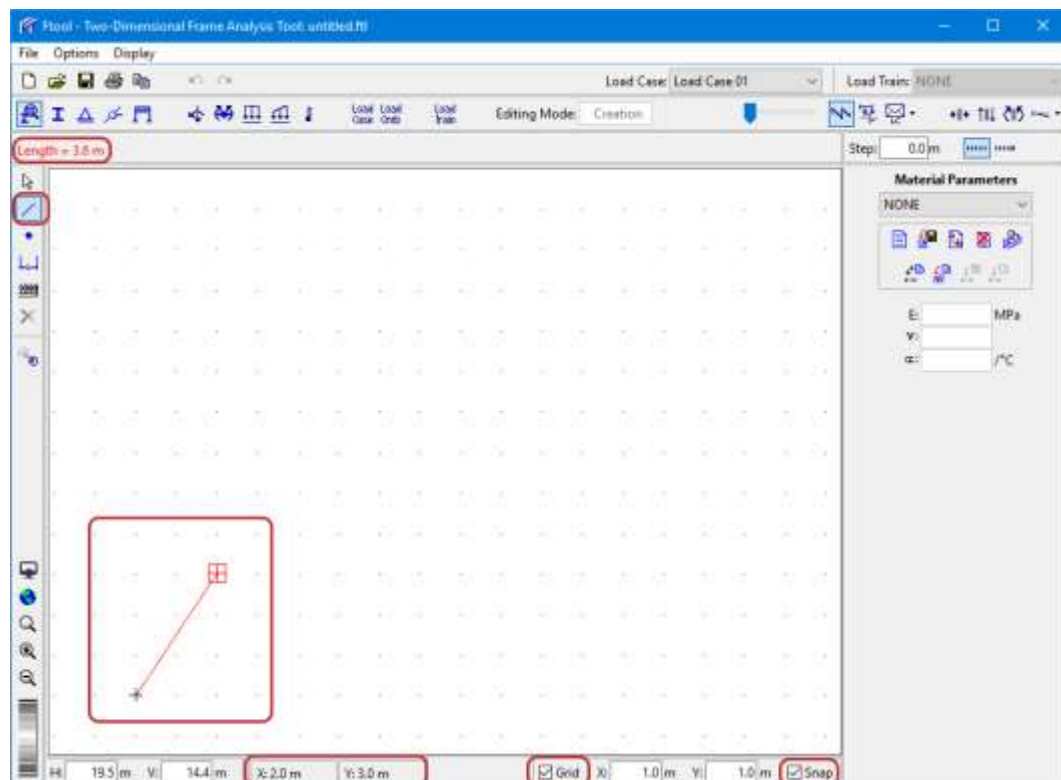
Table of Contents

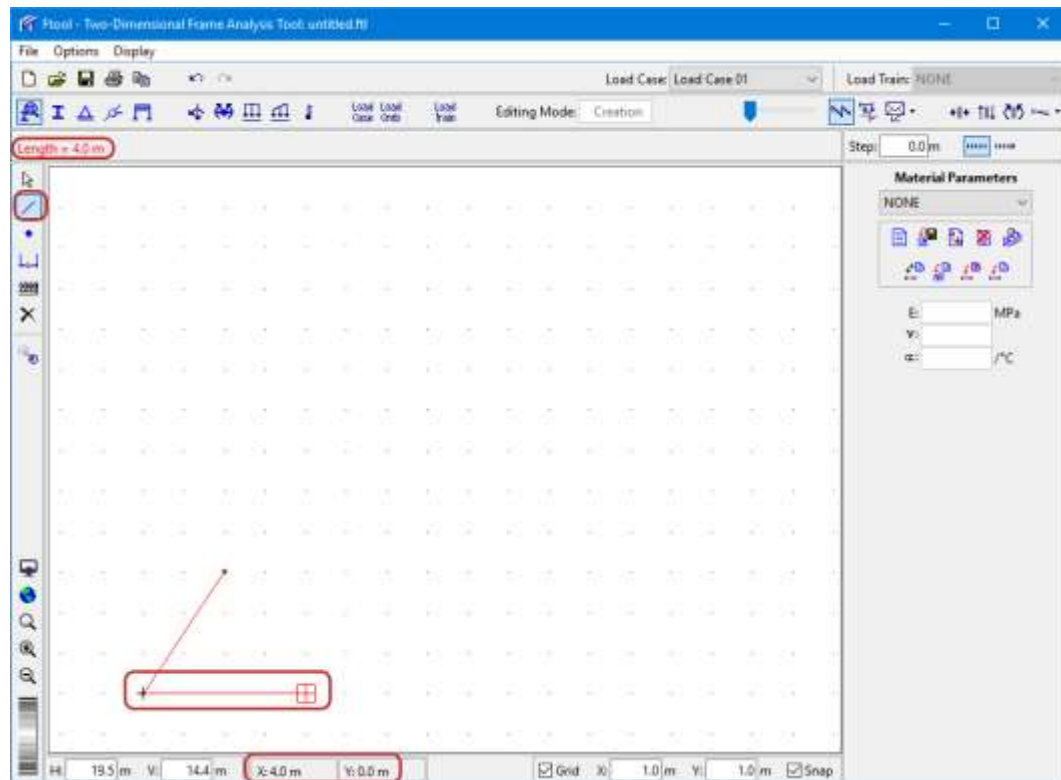## Specification of units and number formatting

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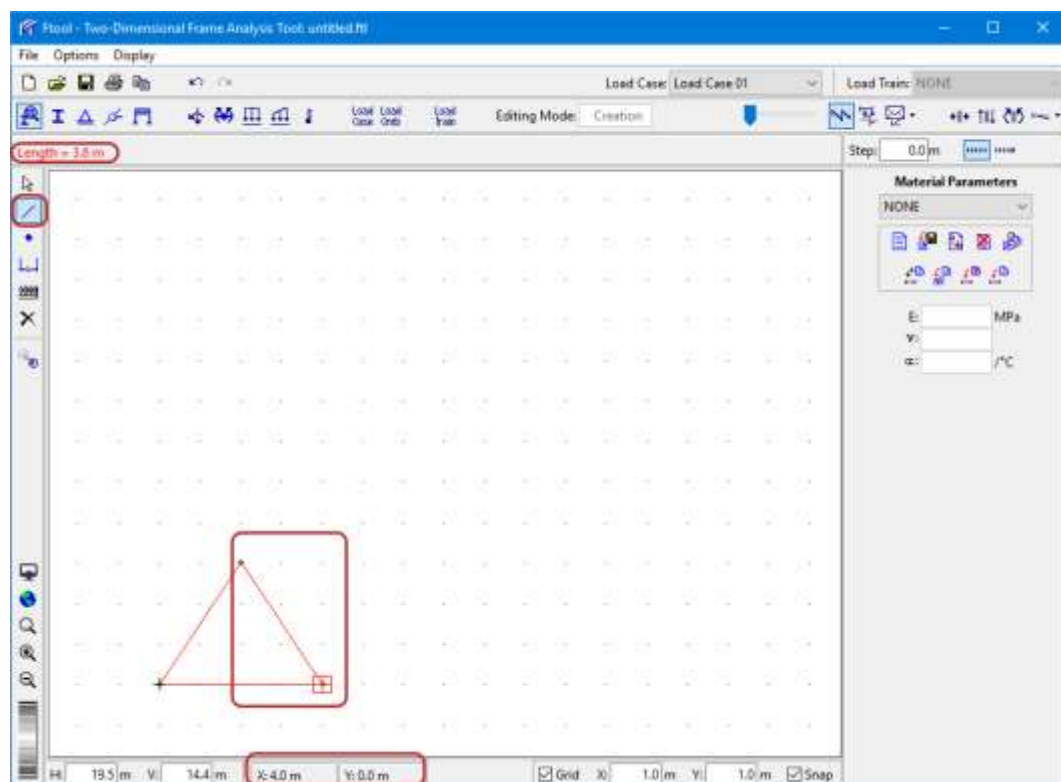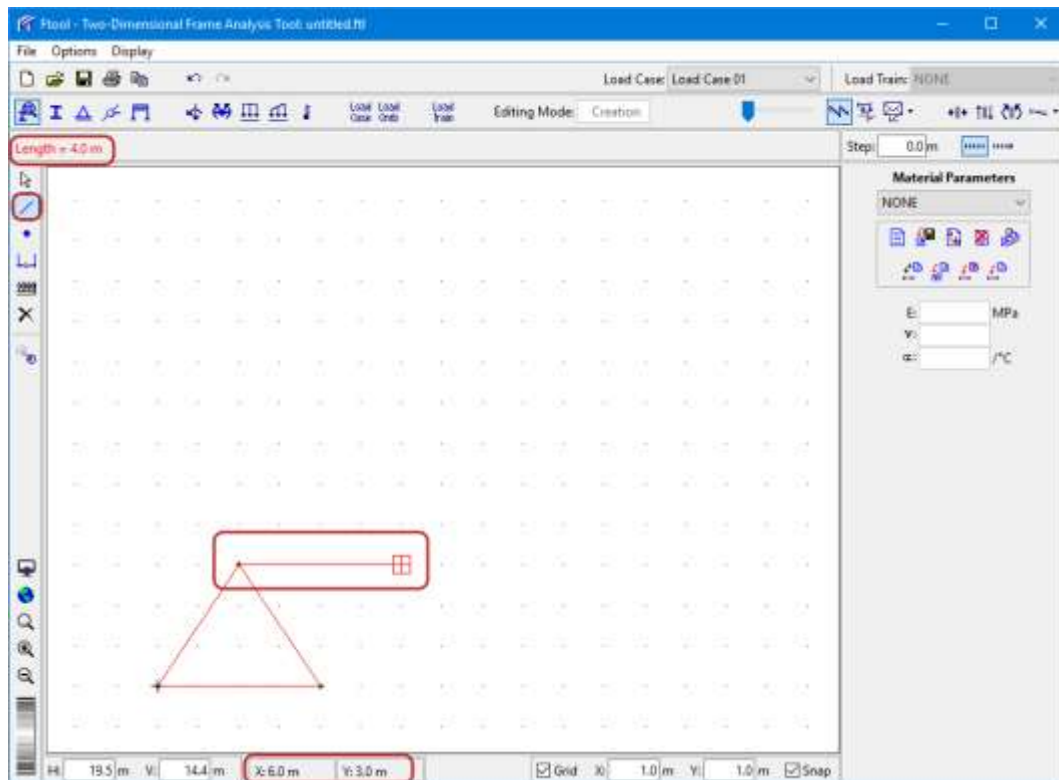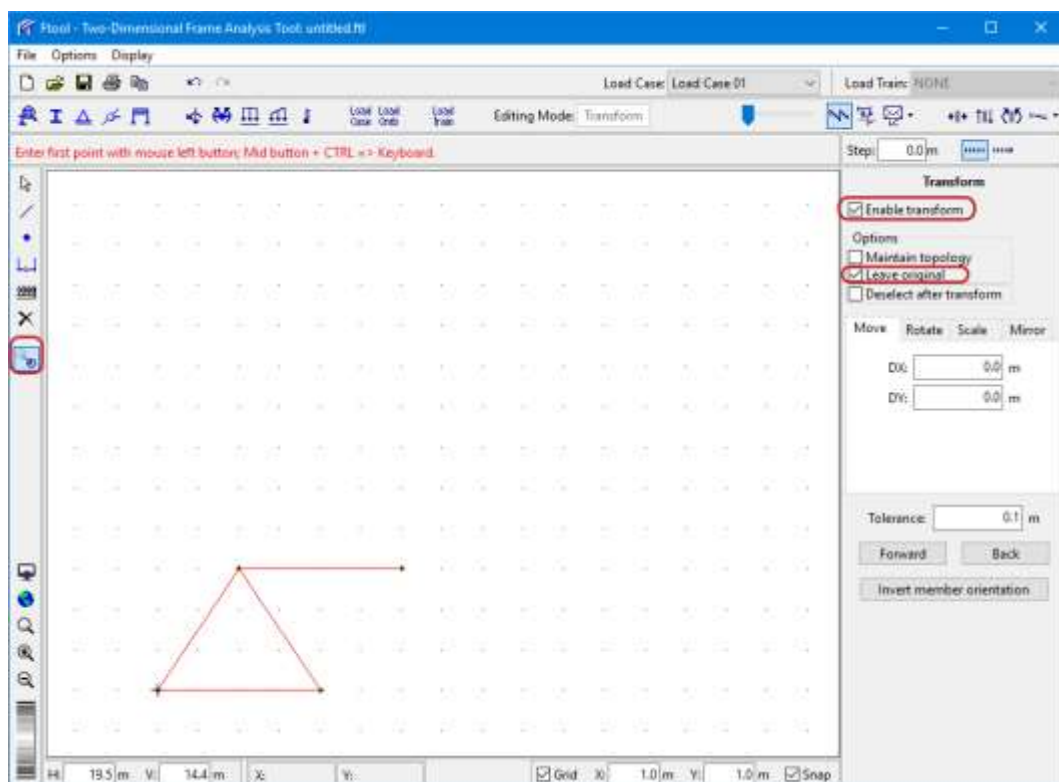
Insertion of second member

Insertion of third member

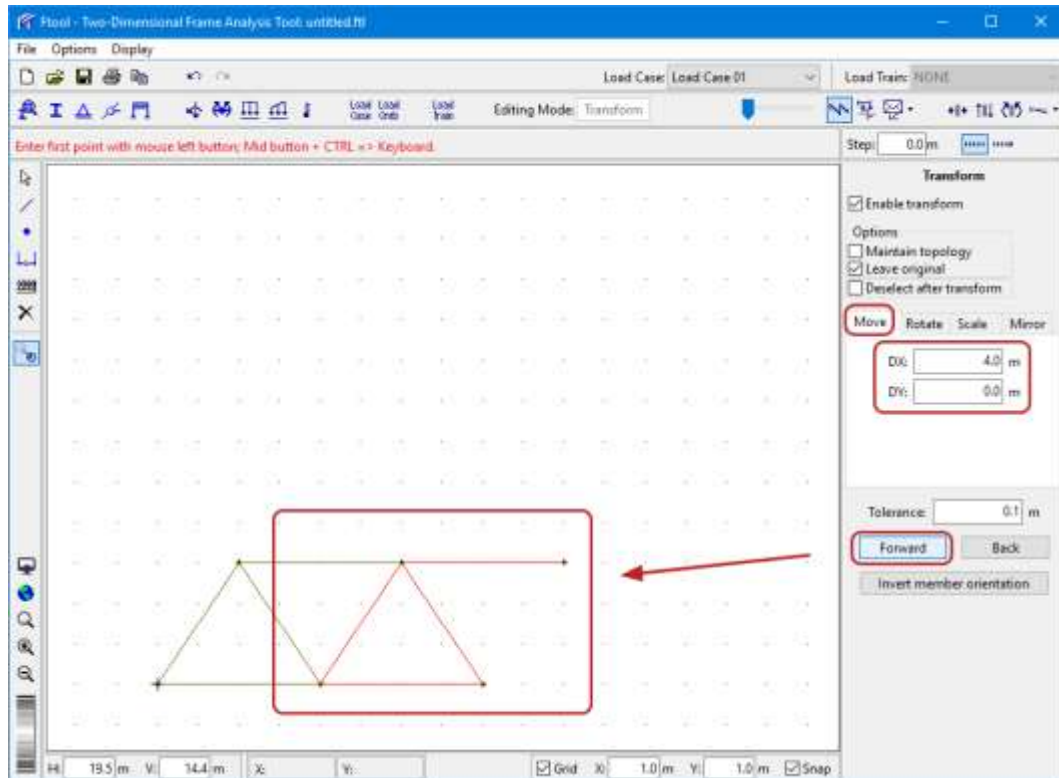## Insertion of fourth member

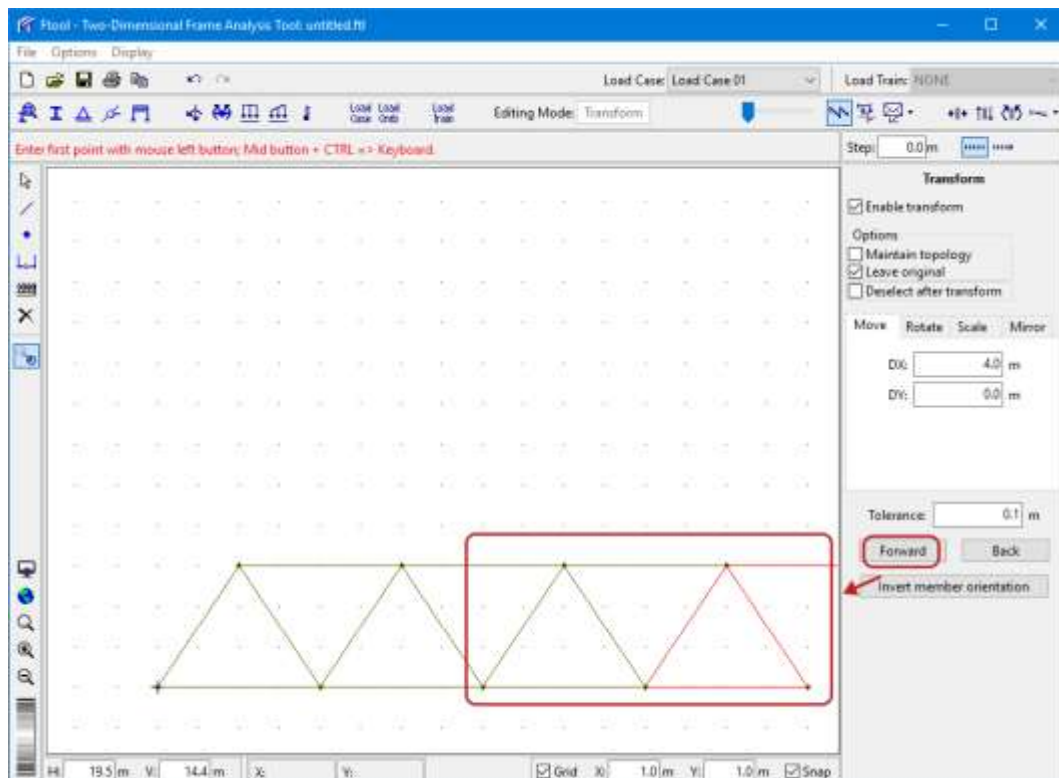## Selection transform operation with copy (*Leave Original*)

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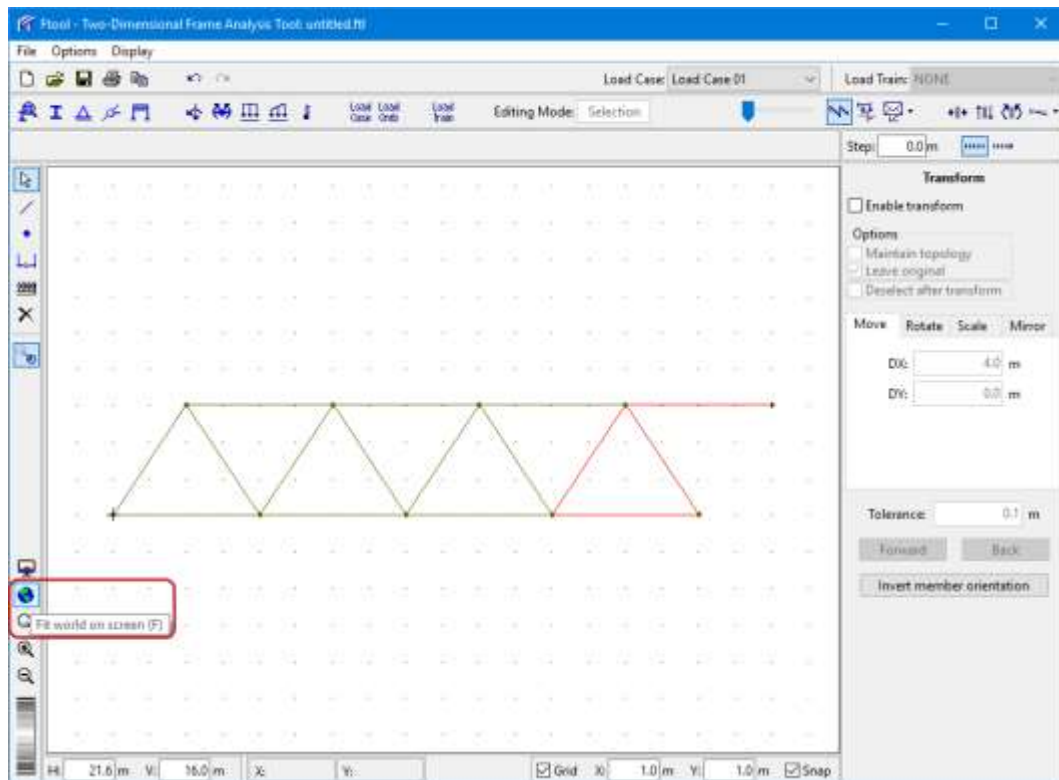

Repeat translation (*Move*) operation with copy (*Leave Original*) twice
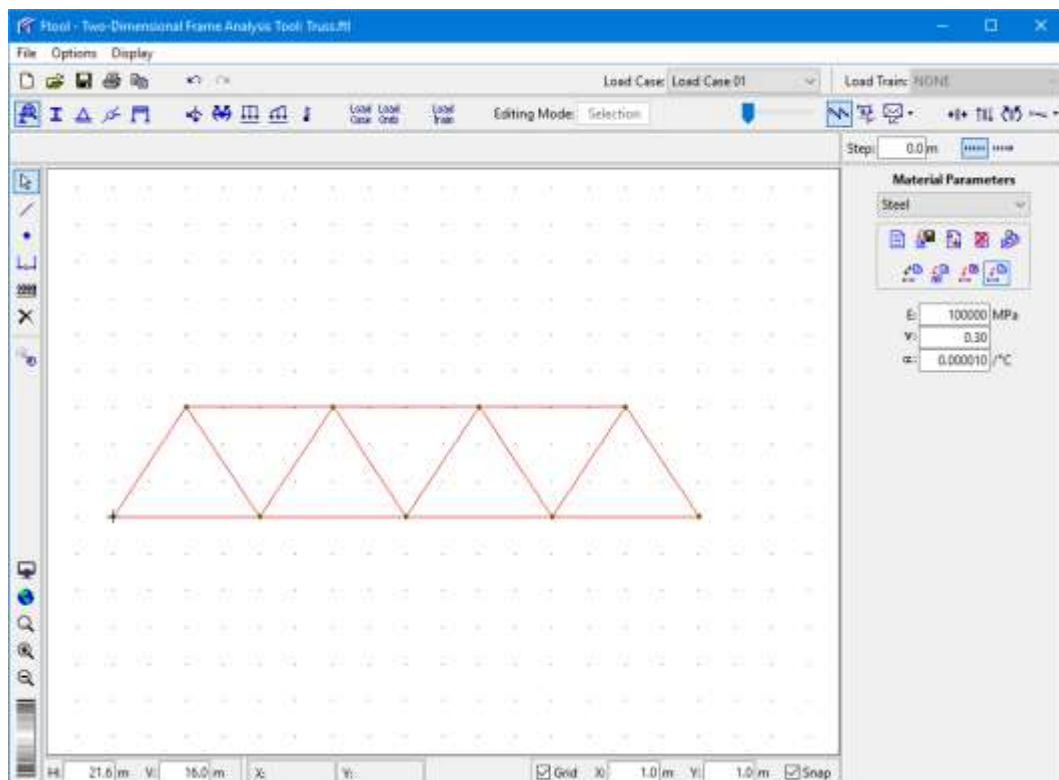
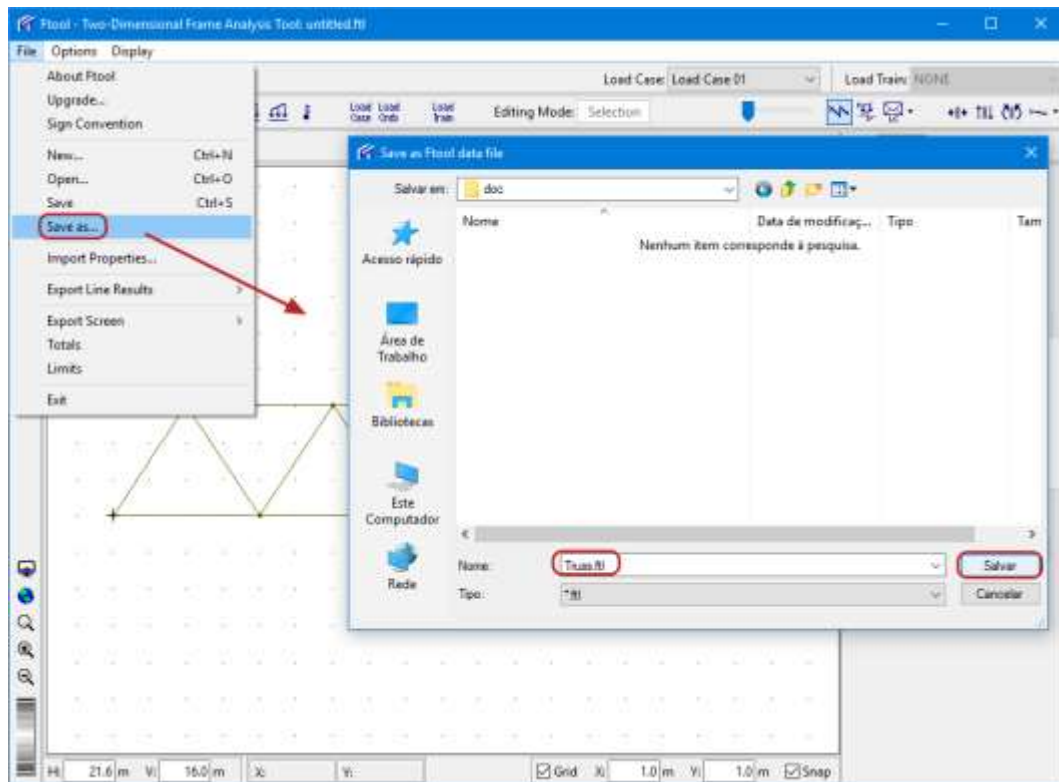## Fit image of entire model on screen

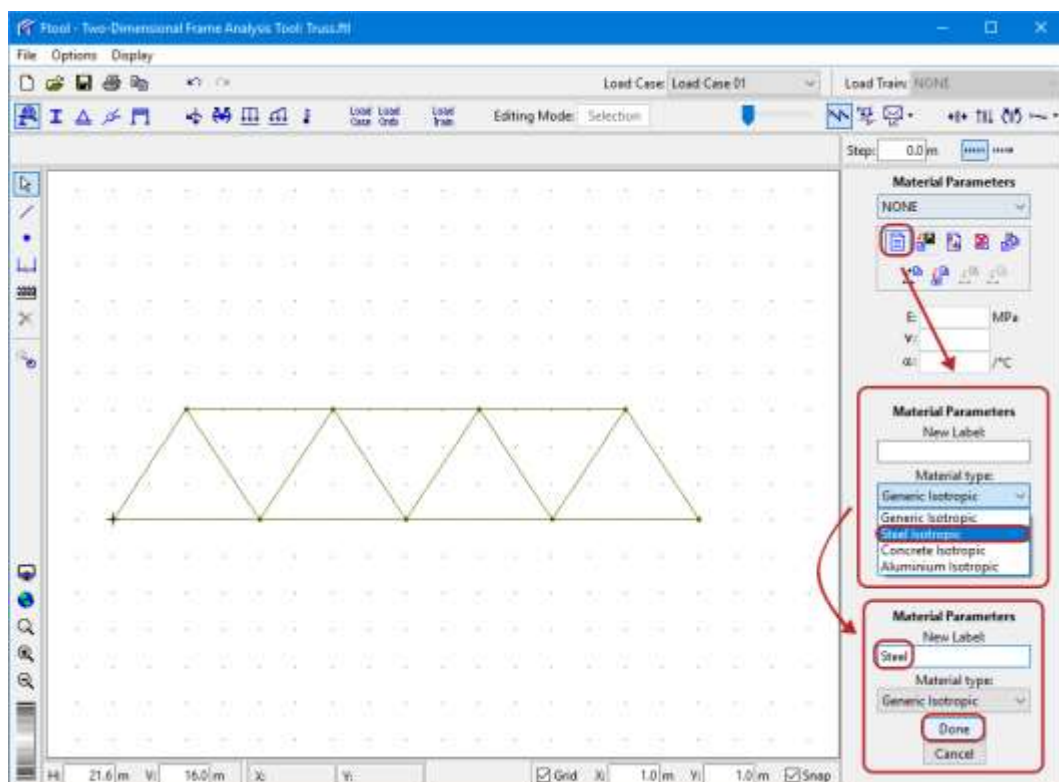## Delete dangling member remaining for last move-with-copy operation

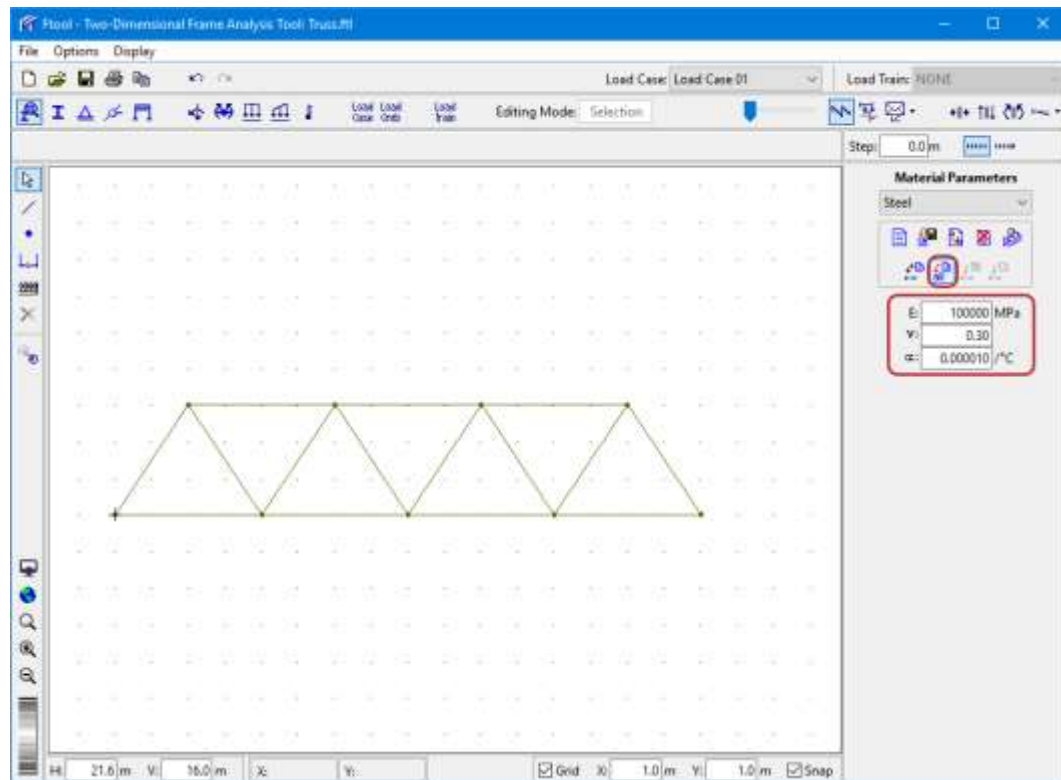## Create a file for truss model (command "Save as... ")

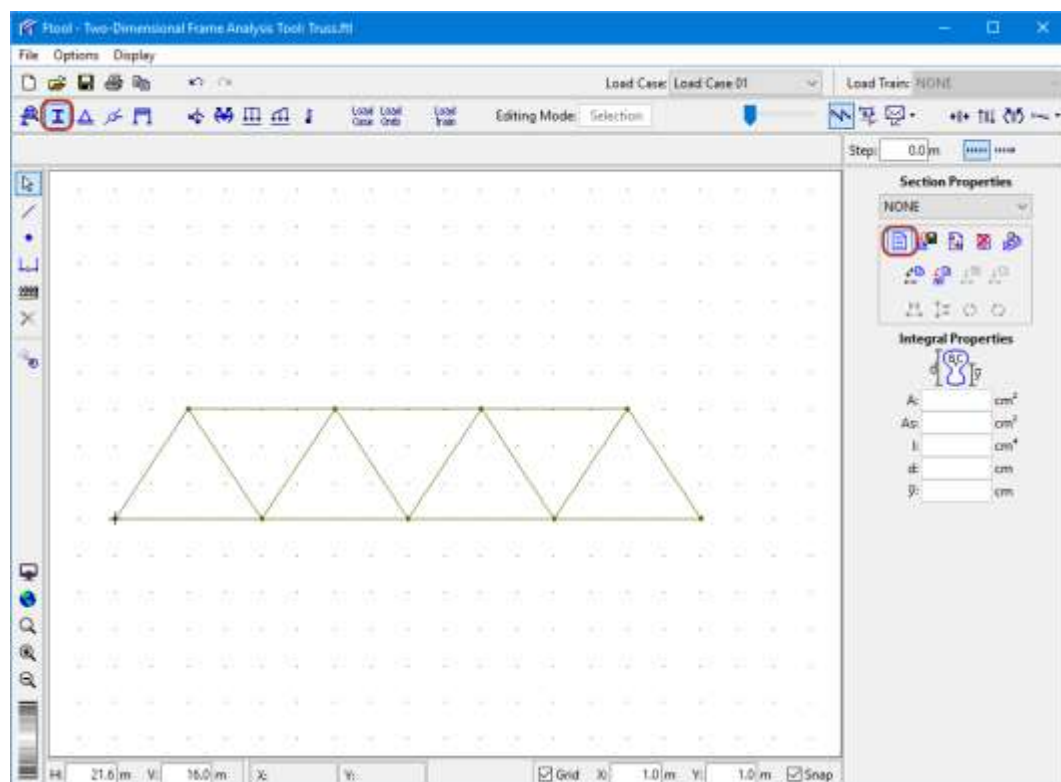## Creation of new material, selecting its type and name
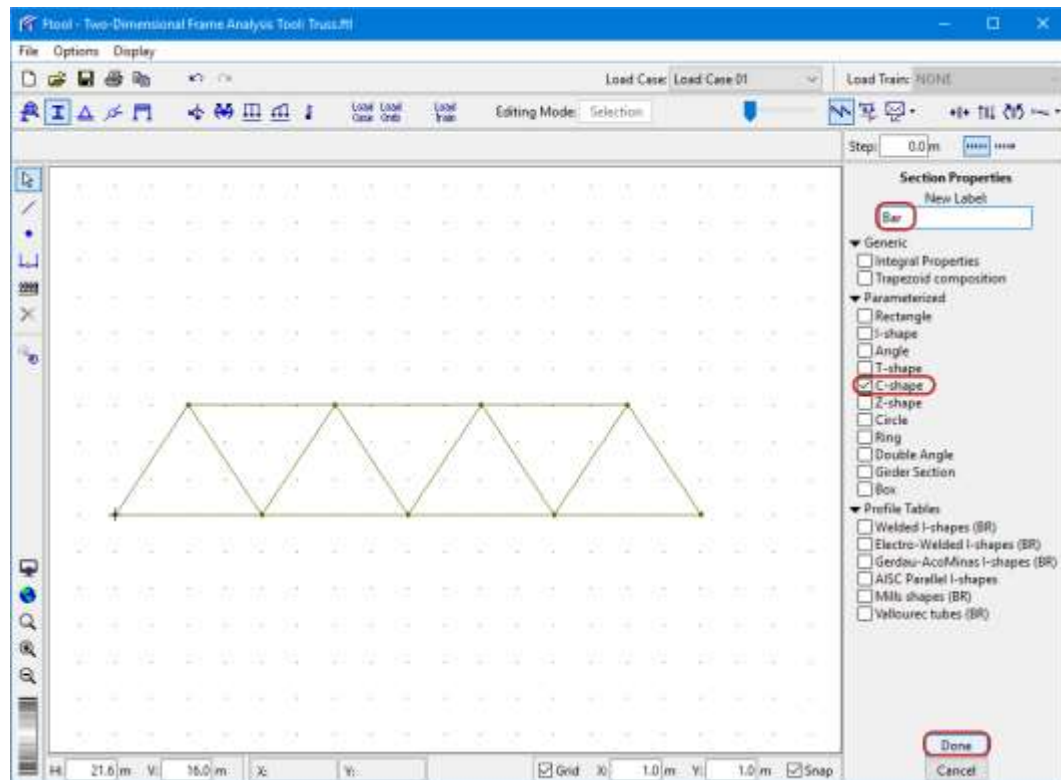
Assignment of created material to all selected members

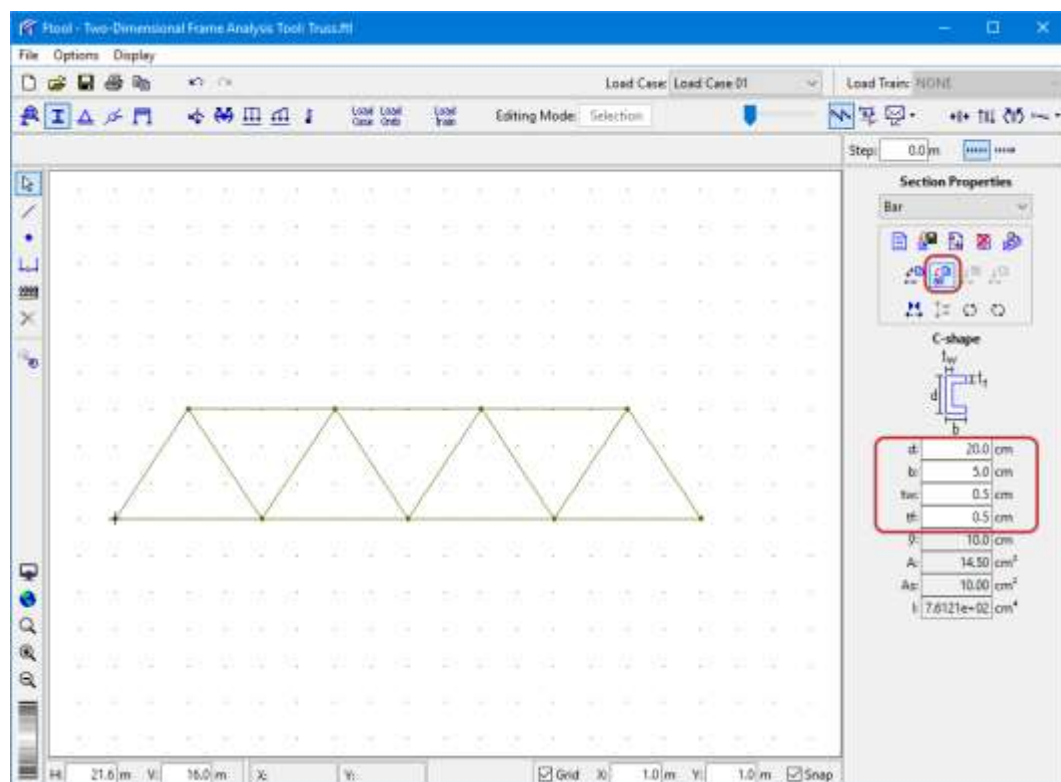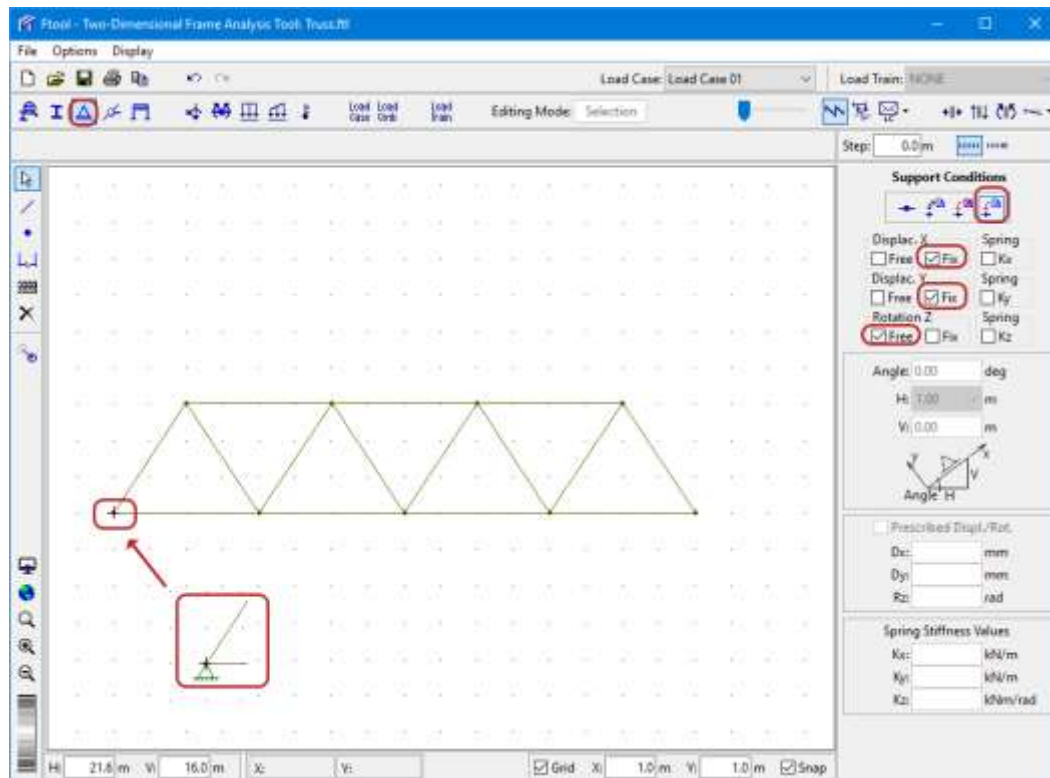## Creation of new cross-section for all members

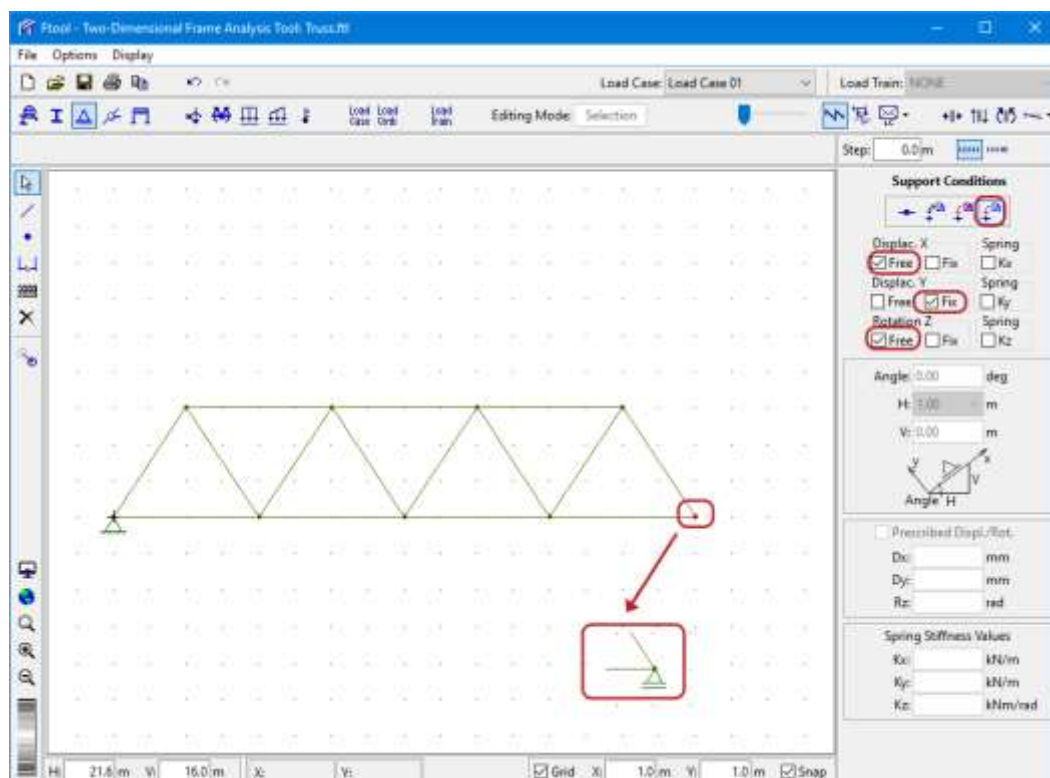## Selection of C-shape cross-section type for all members

Definition of cross-section dimensions and assignment to all members

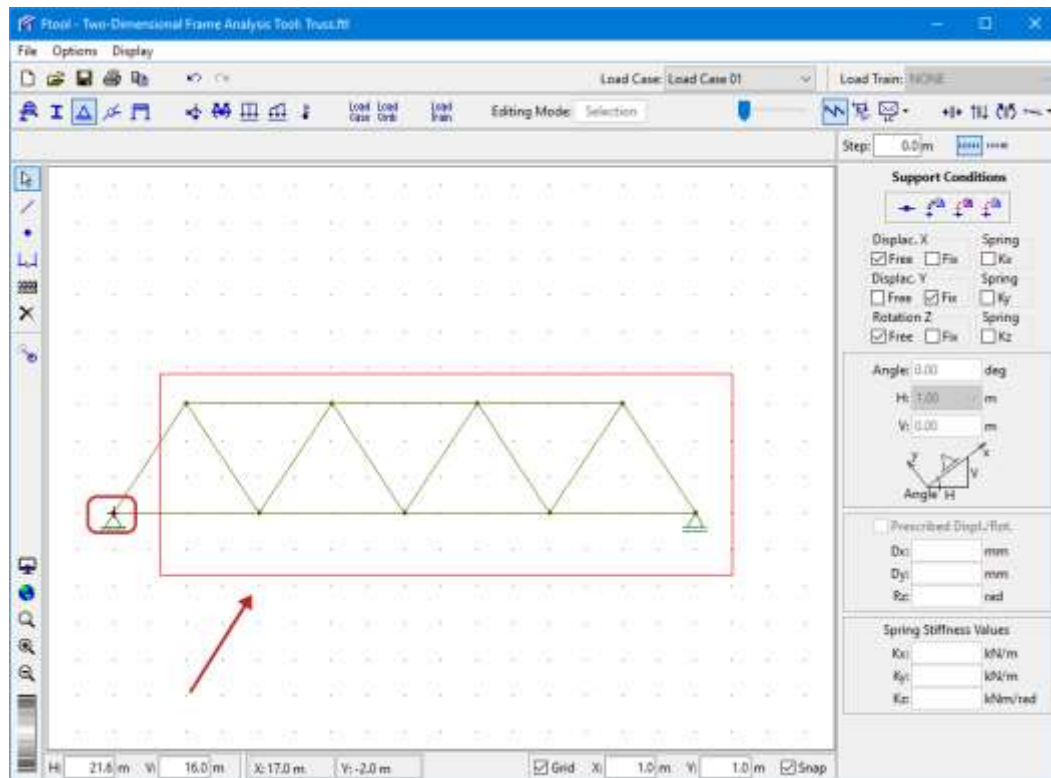# Definition of a pin support and assignment to left inferior node

Definition of a simple support and assignment to right inferior node
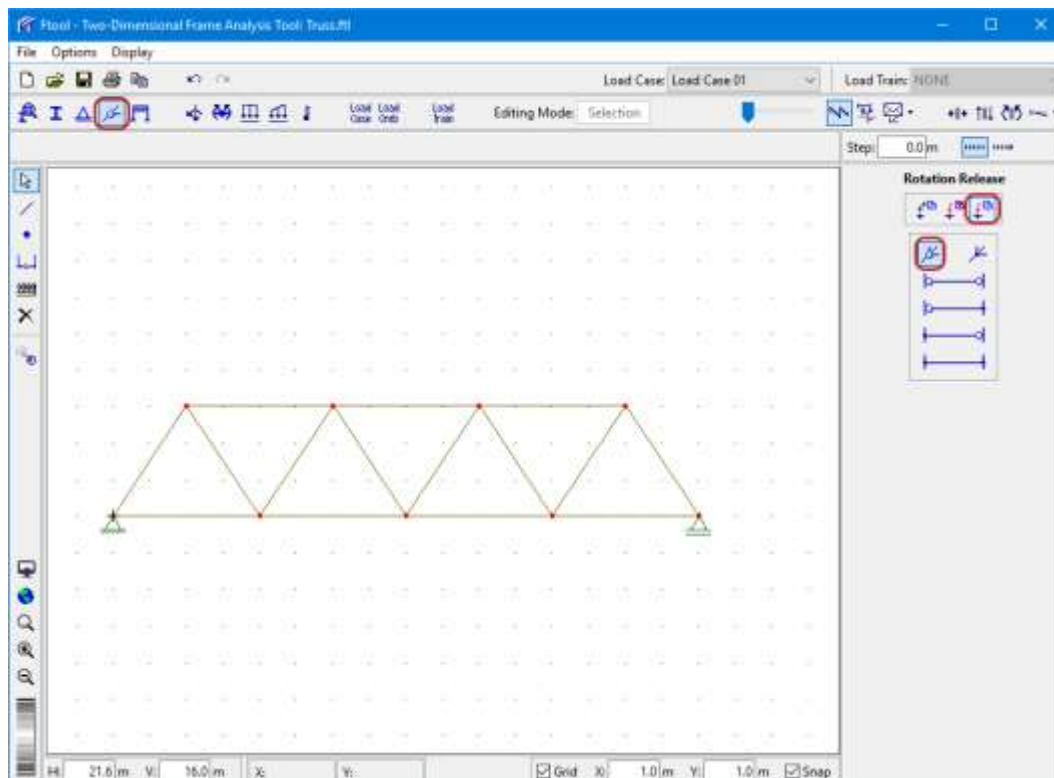
Selection of a single node followed by selection of all nodes through a rectangular fence using the mouse (with *Shift* key)
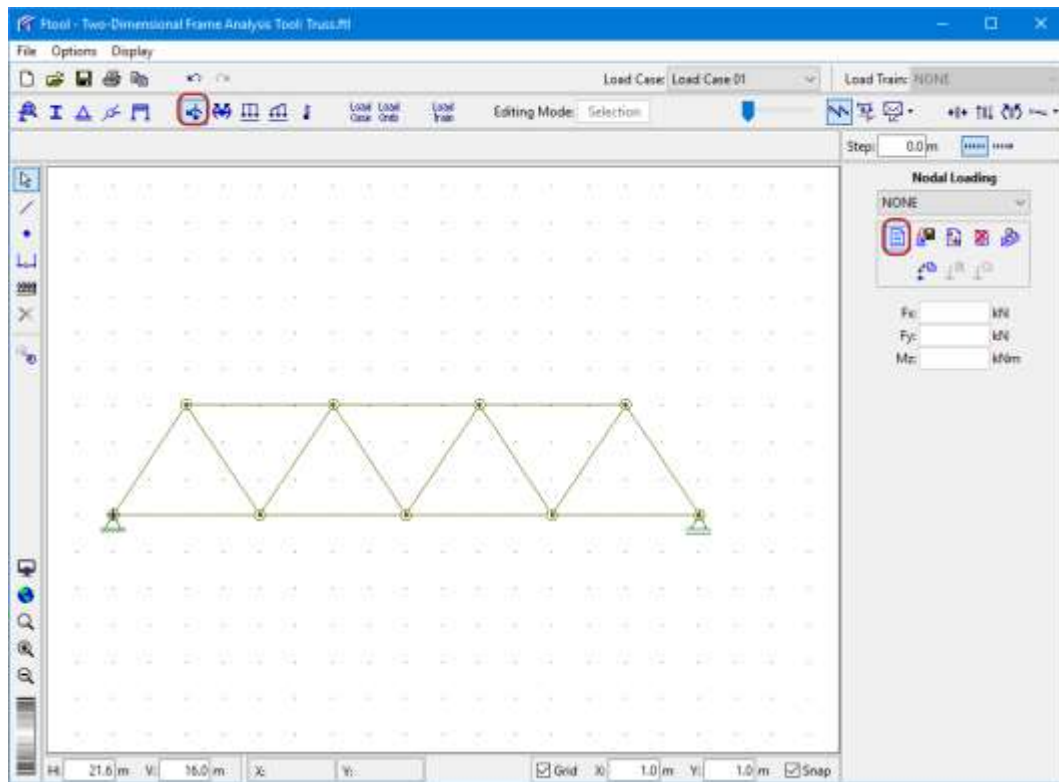

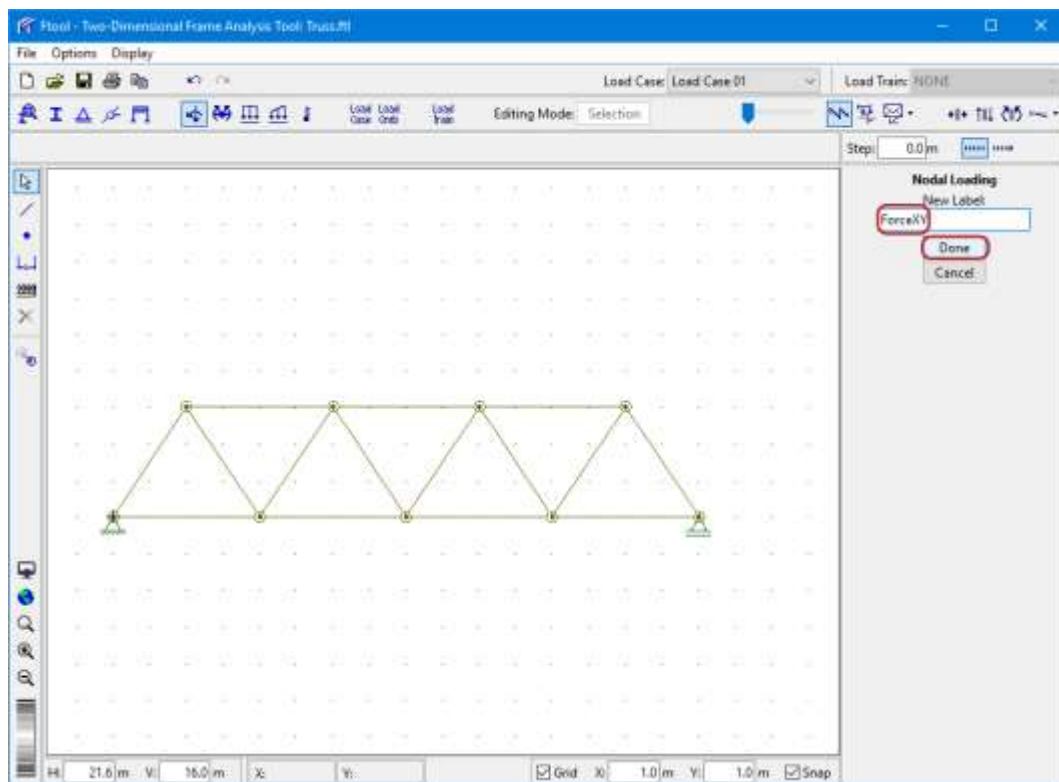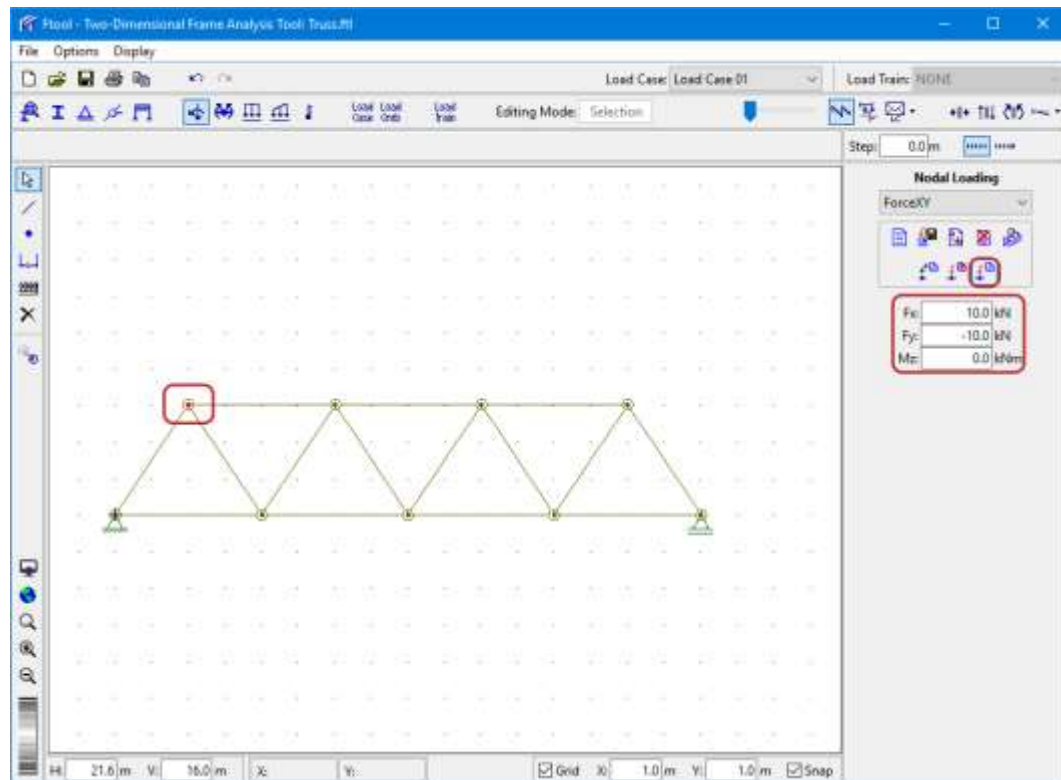## Application of a complete hinge to all selected nodes

Creation of a concentrated force load for left superior node
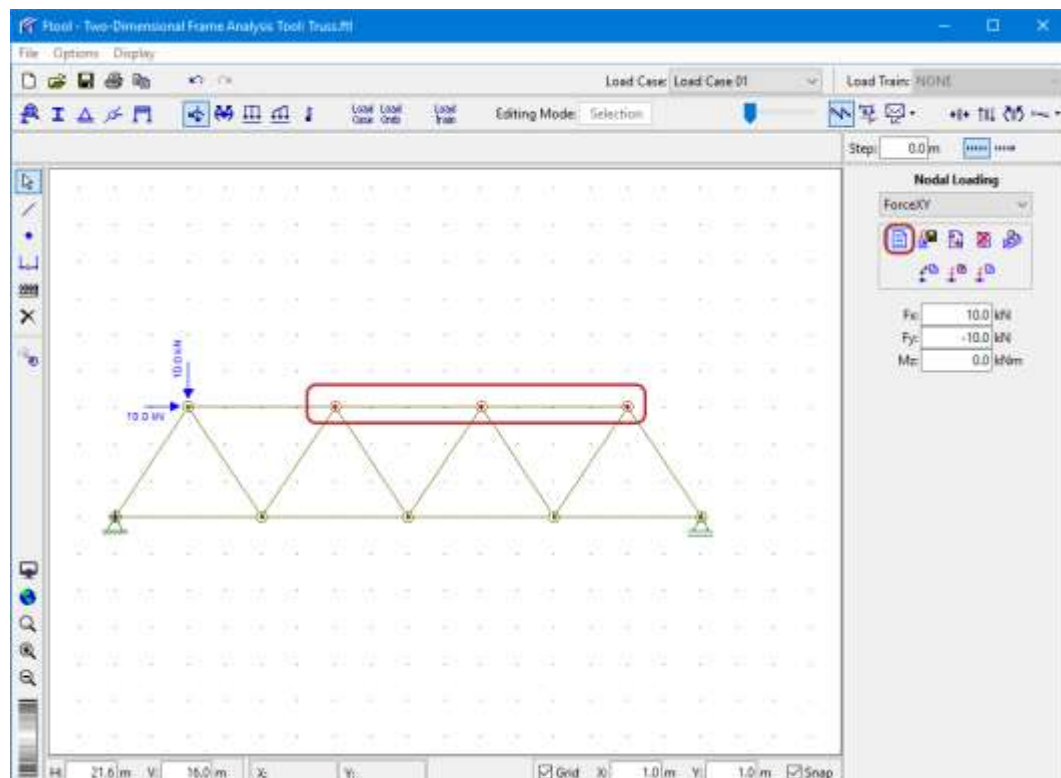

Definition of name of concentrated force load at left superior node
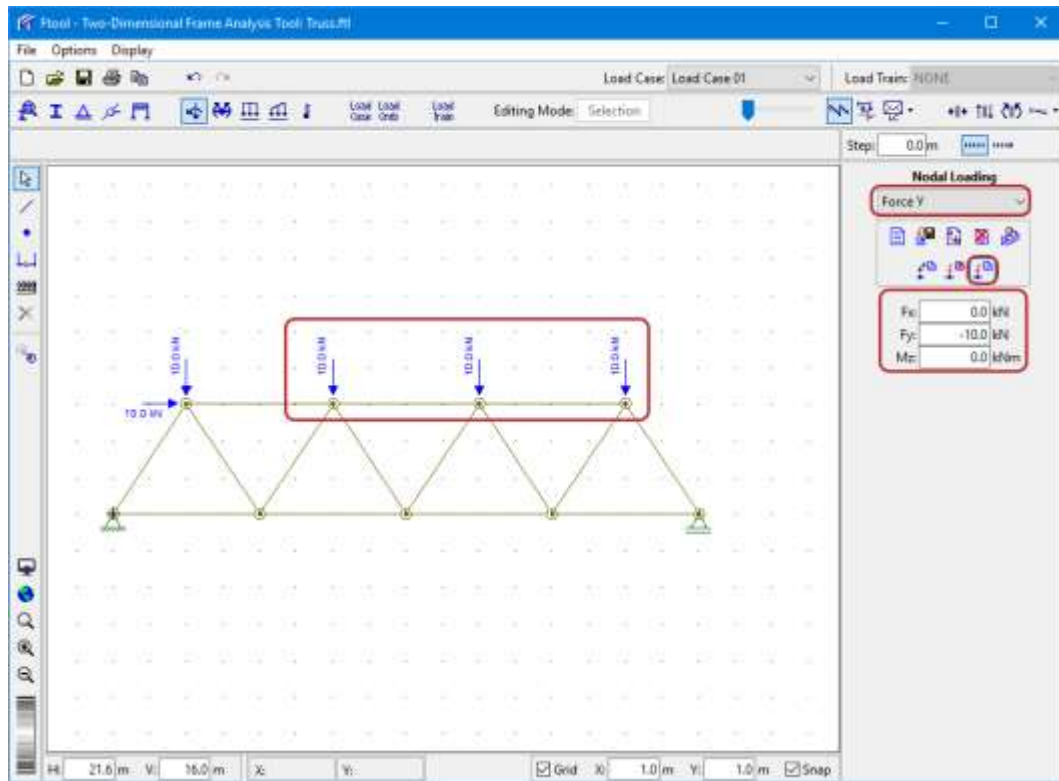
Definition of *X* and *Y* component values of concentrated force load and application to left superior node
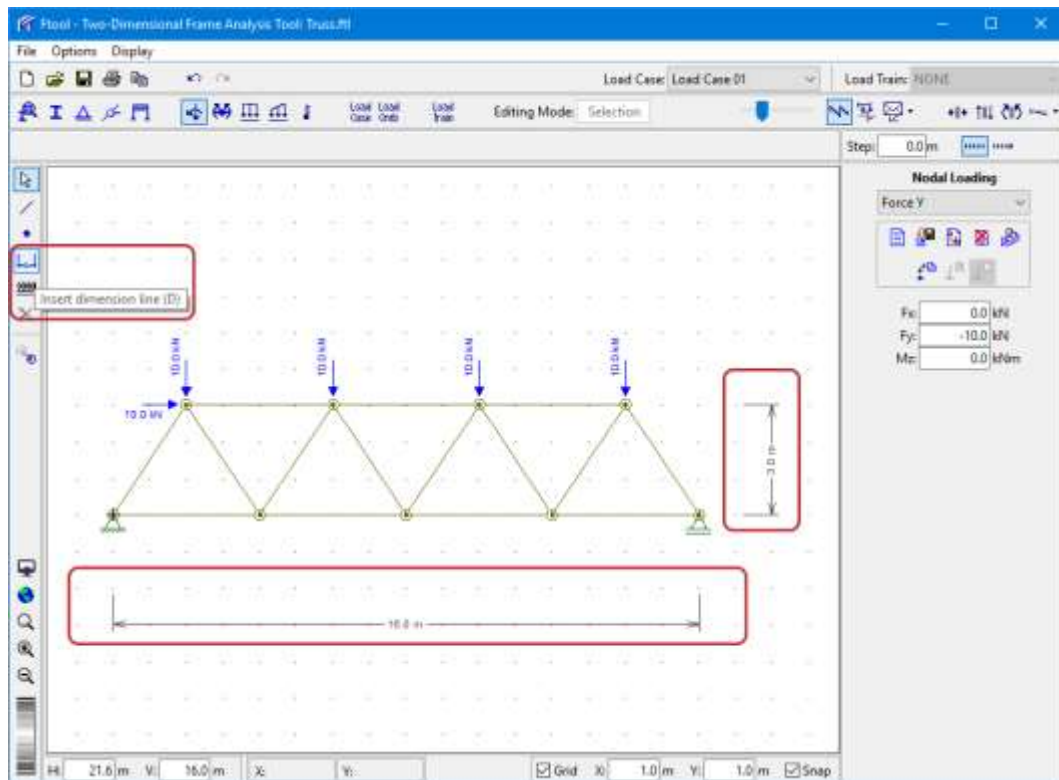

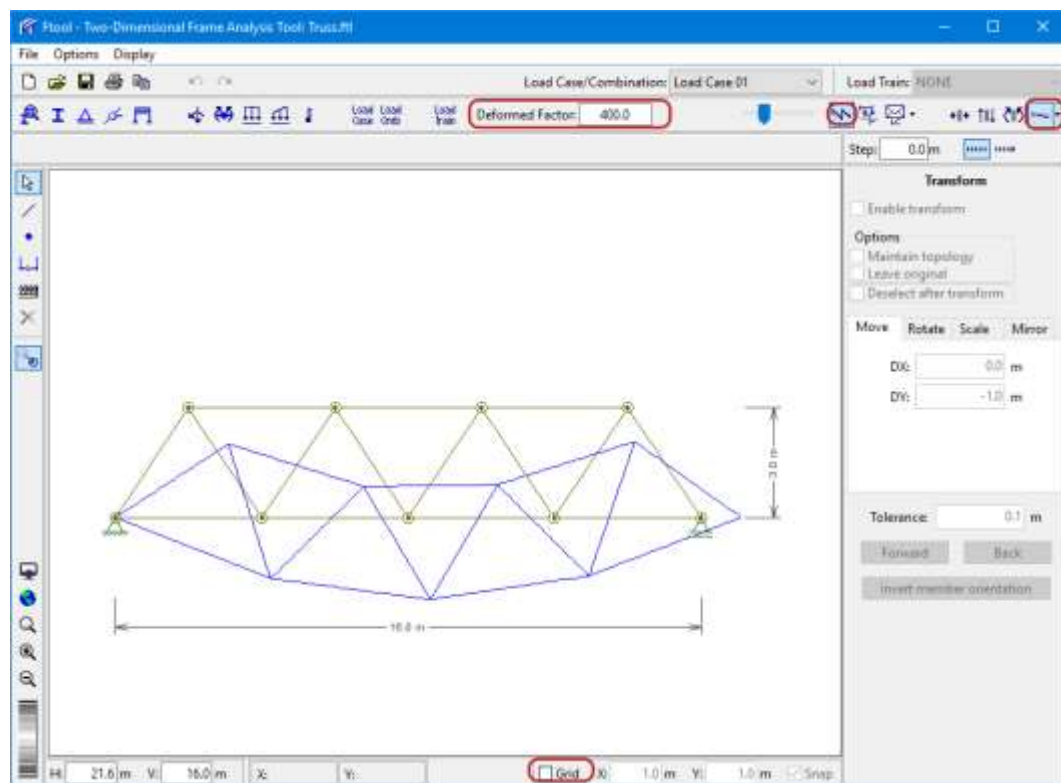## Creation of concentrated force load for the other superior nodes

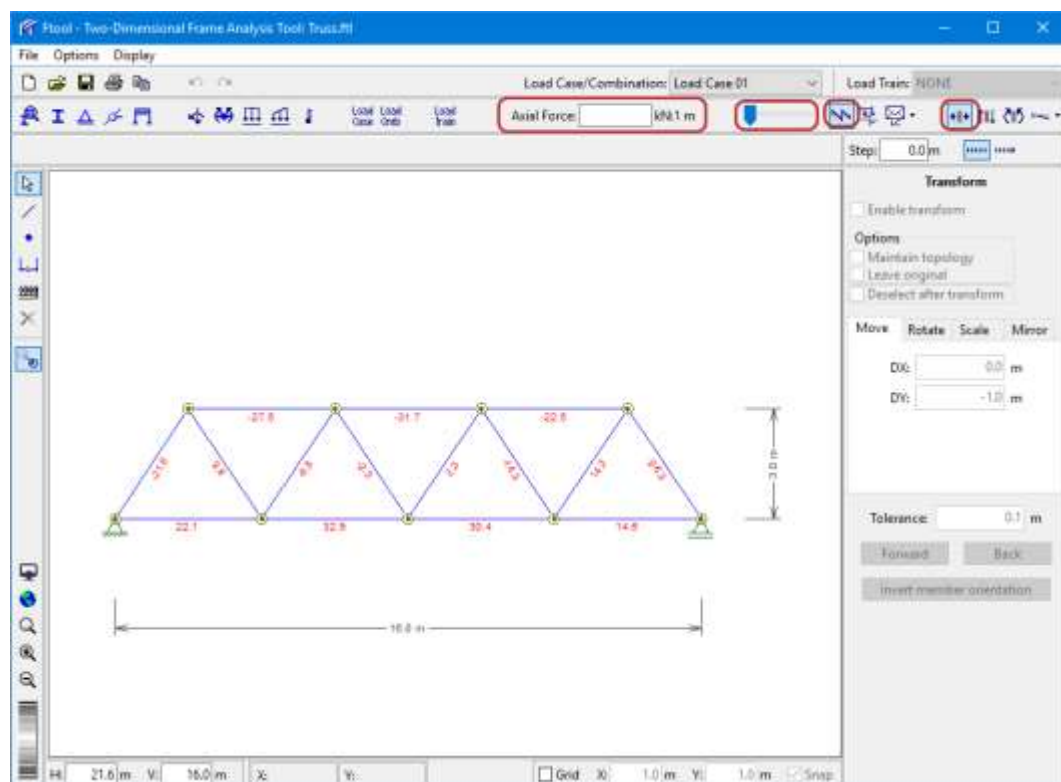## Definition of name and *Y* component value of concentrated force load and application to other superior nodes

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