

TM 227 - Estática

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Departamento de Engenharia Mecânica
UFPR

TM-227, 2012



TÓPICOS

INTRODUÇÃO

MODELAGEM-GEOMETRIA

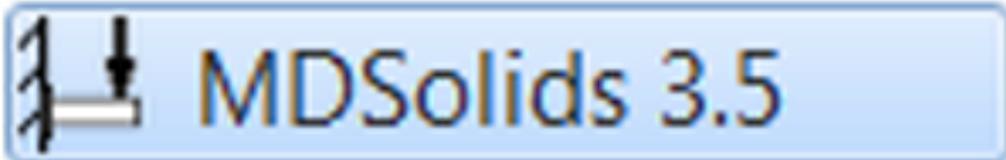
MODELAGEM-RESTRIÇÕES

MODELAGEM-FORÇAS

RESULTADOS

EXEMPLO-I

EXEMPLO-II



MDSolids 3.5

The logo for MDSolids, featuring the text "MDSolids" in a bold, teal, sans-serif font. The letters are slightly 3D and have a slight shadow.

Windows XP
Windows Vista

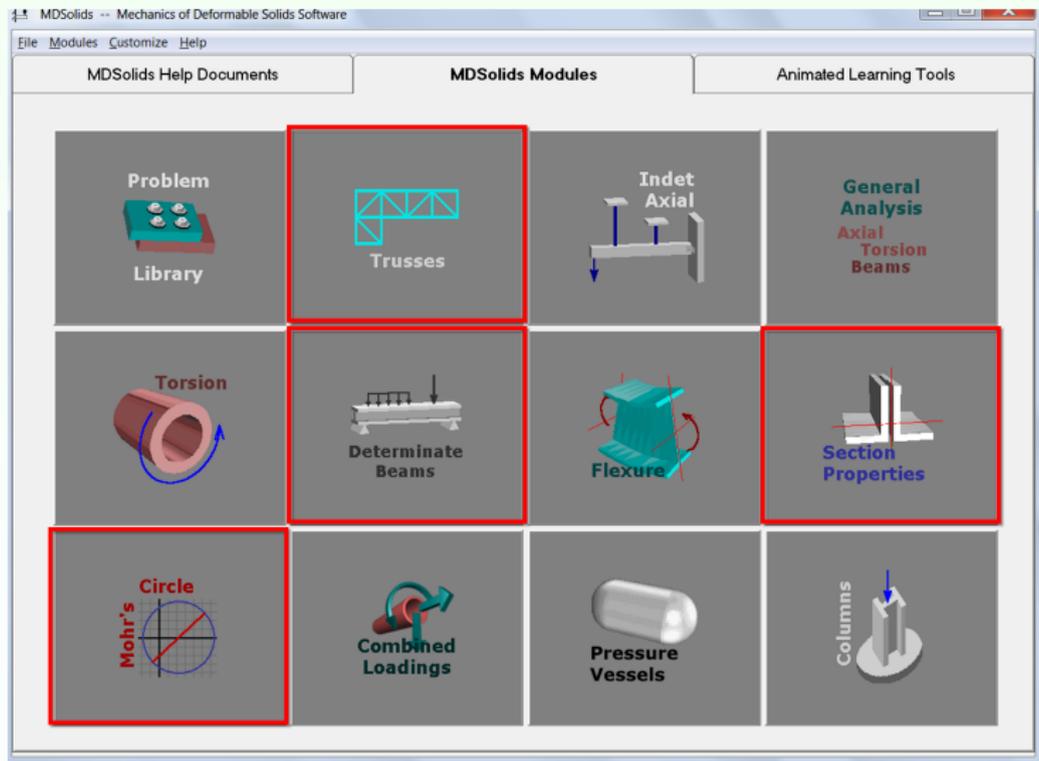
Registered to
Cualquiera

Full version - Single user license

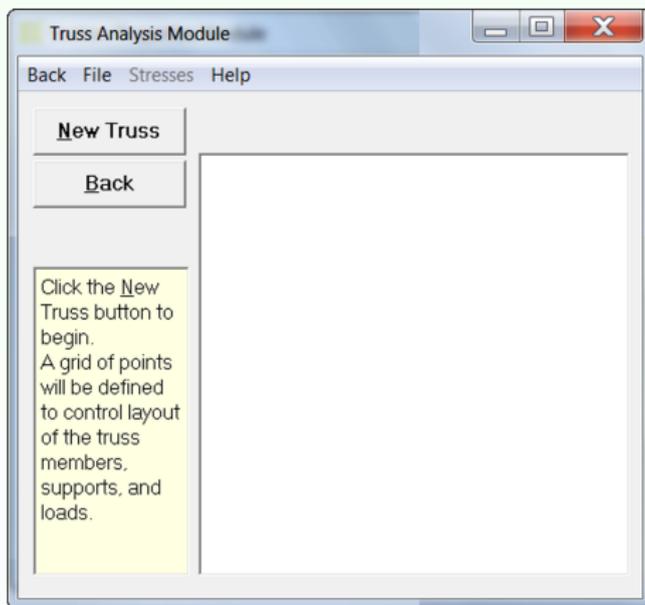
Version 3.5.0

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MDSolids 3.5



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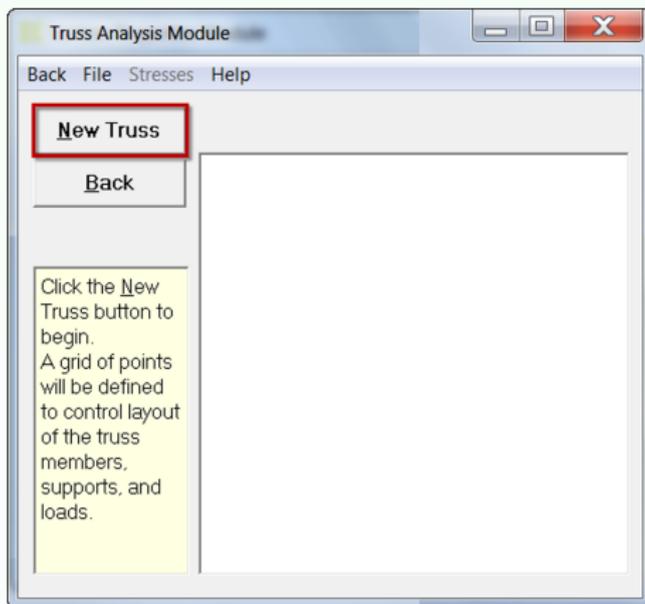
RESULTADOS

EXEMPLO-I

EXEMPLO-II

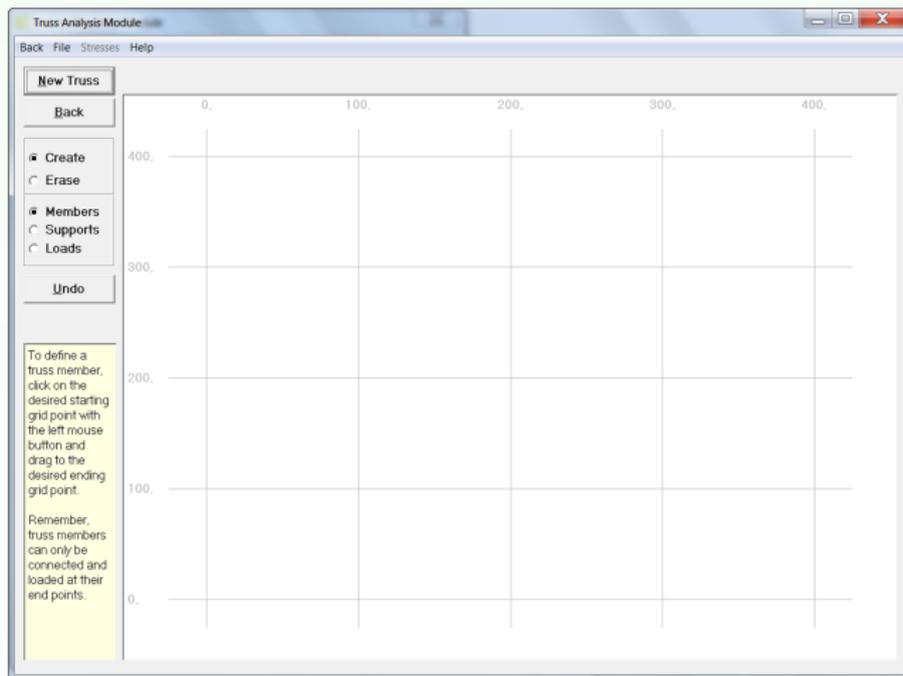
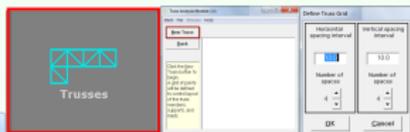


Definindo a estrutura da treliça



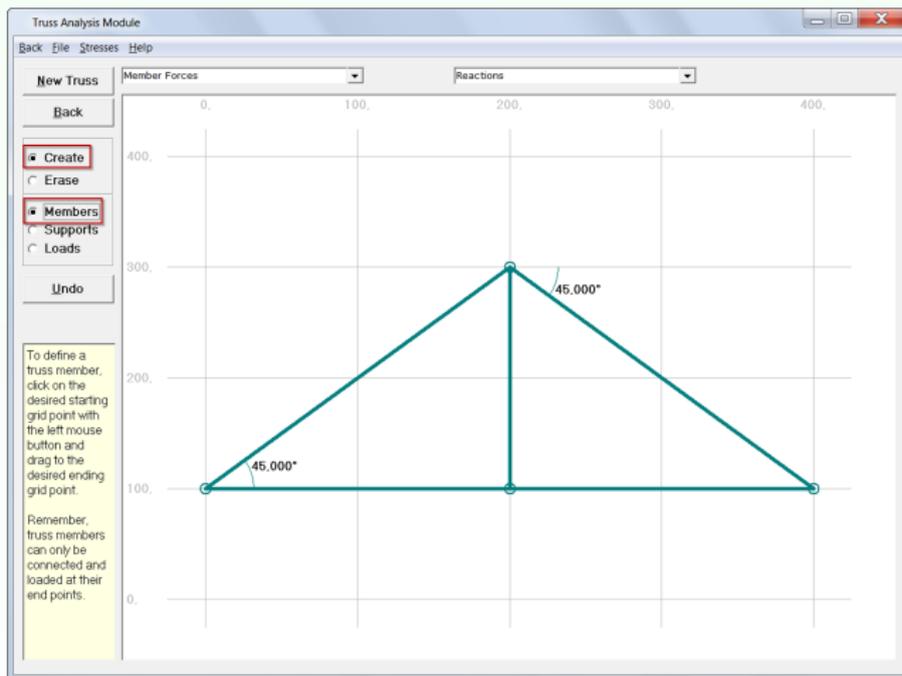
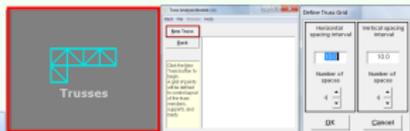
Definindo a estrutura da treliça

MDSolids 3.5



Definindo a estrutura da treliça

MDSolids 3.5



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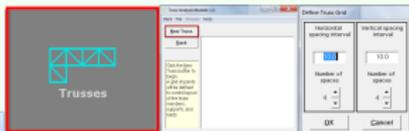
EXEMPLO-I

EXEMPLO-II



Colocando os suportes

MDSolids 3.5



Truss Analysis Module

Back File Stresses Help

New Truss

Back

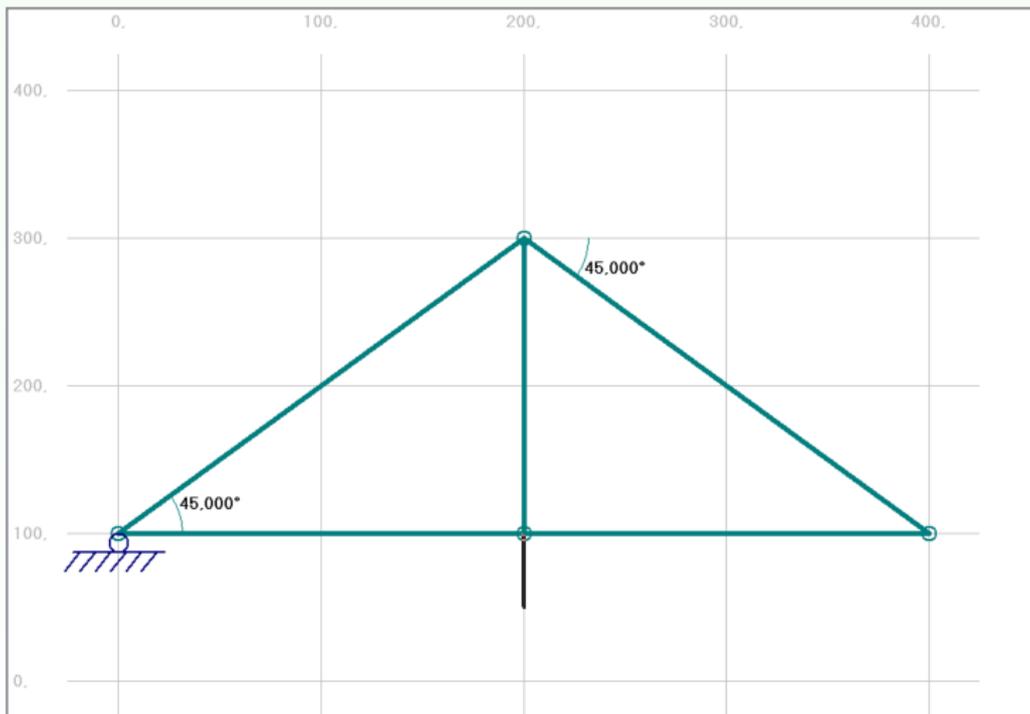
- Create
- Erase
- Members
- Supports**
- Loads

Click on the supported truss joint with the left mouse button and drag in either the X- or Y-direction.

A statically determinate truss requires three support conditions. Usually one joint is pinned while a second joint is supported with

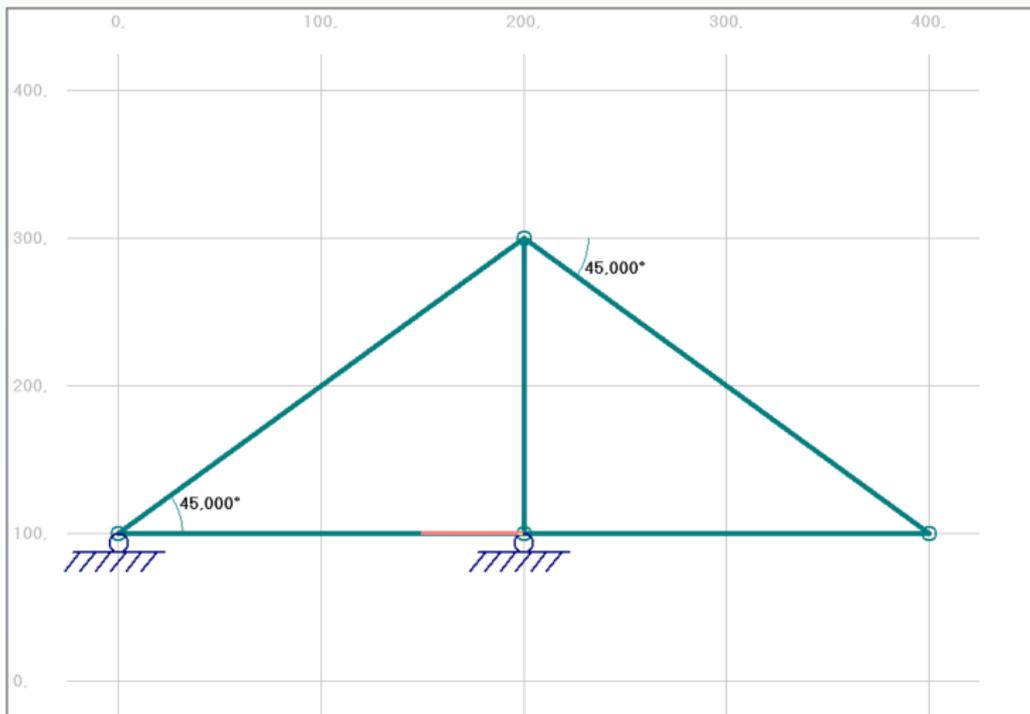
Colocando os suportes

MDSolids 3.5



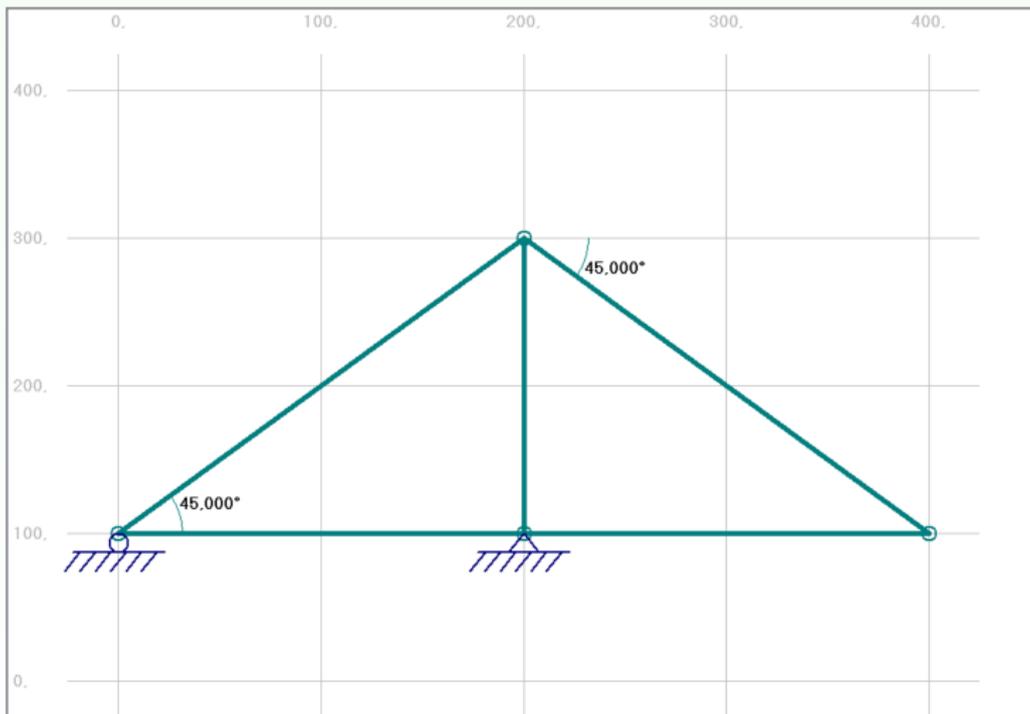
Colocando os suportes

MDSolids 3.5



Colocando os suportes

MDSolids 3.5



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Estabelecendo as forças

MDSolids 3.5



Truss Analysis Module

Back File Stresses Help

New Truss Member Forces Reactions

Back

- Create
- Erase
- Members
- Supports
- Loads**

To specify a load, click on the desired truss joint with the left mouse button and drag either up, down, left, or right.

After releasing the mouse button, a box will appear in which the force magnitude is entered.

Define Truss Load

Load Magnitude: 200

(right to left direction)

Enter Load Cancel



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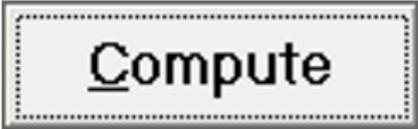


Computando o resultado

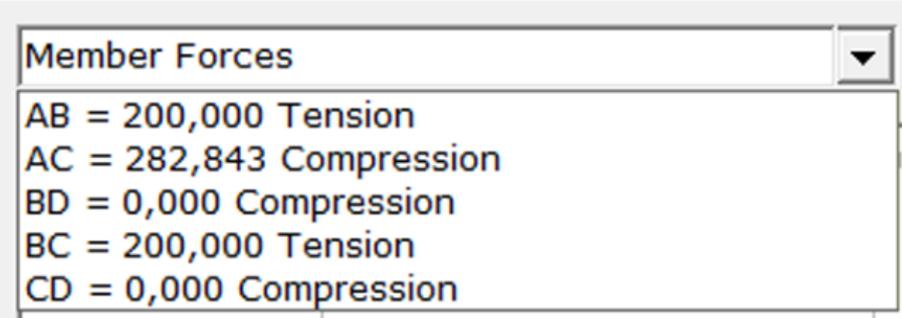


Compute

Computando o resultado



Compute



Member Forces

AB = 200,000 Tension

AC = 282,843 Compression

BD = 0,000 Compression

BC = 200,000 Tension

CD = 0,000 Compression

Computando o resultado

Compute

Member Forces

AB = 200,000 Tension
AC = 282,843 Compression
BD = 0,000 Compression
BC = 200,000 Tension
CD = 0,000 Compression

Reactions

Ay = 200,000 Upward
Bx = 200,000 Left to Right
By = 200,000 Downward

Computando o resultado

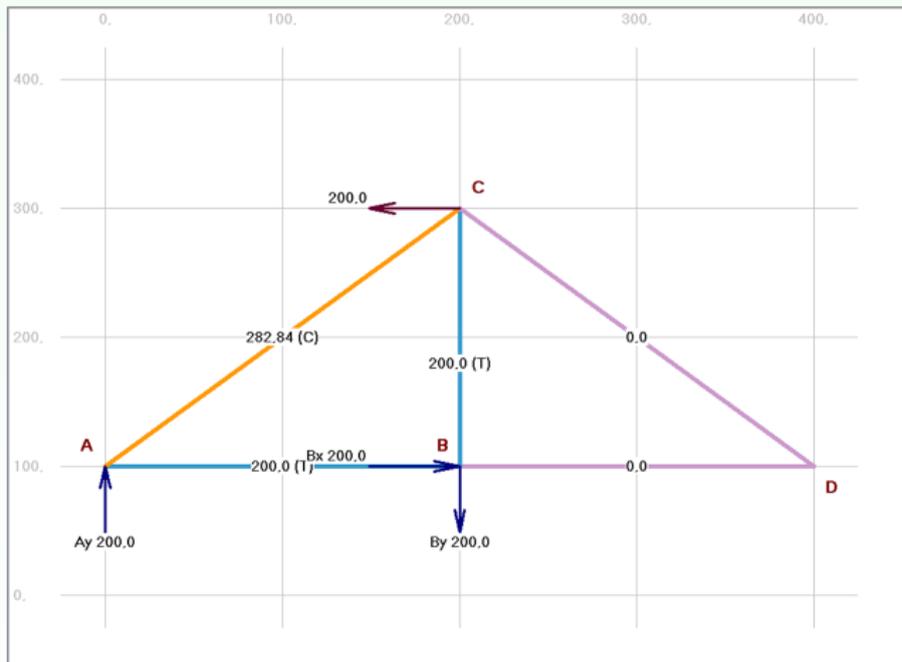
Compute

Member Forces

AB = 200,000 Tension
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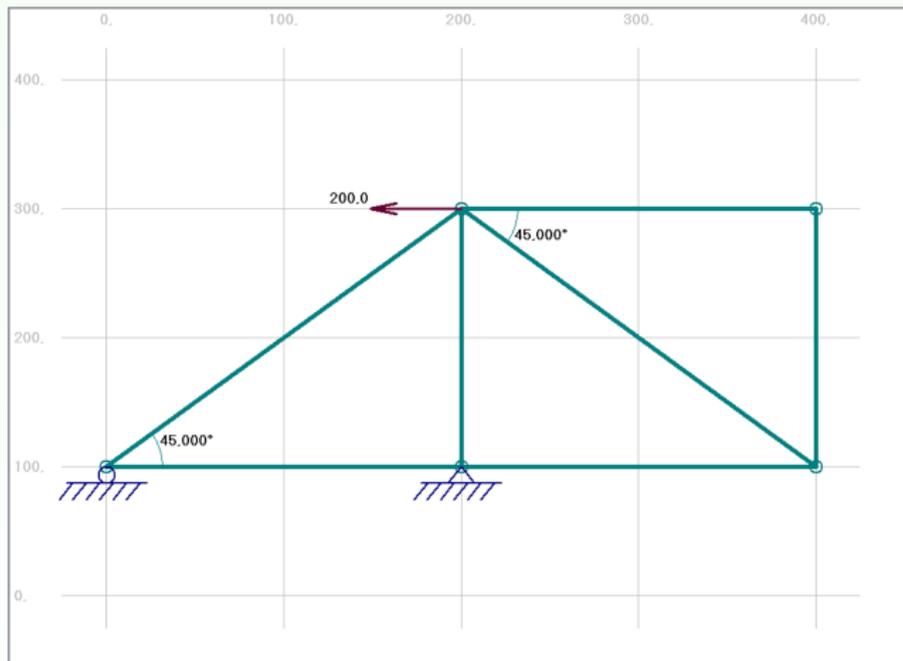
MODELAGEM-FORÇAS

RESULTADOS

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Alterando a estrutura-I



Alterando a estrutura-I



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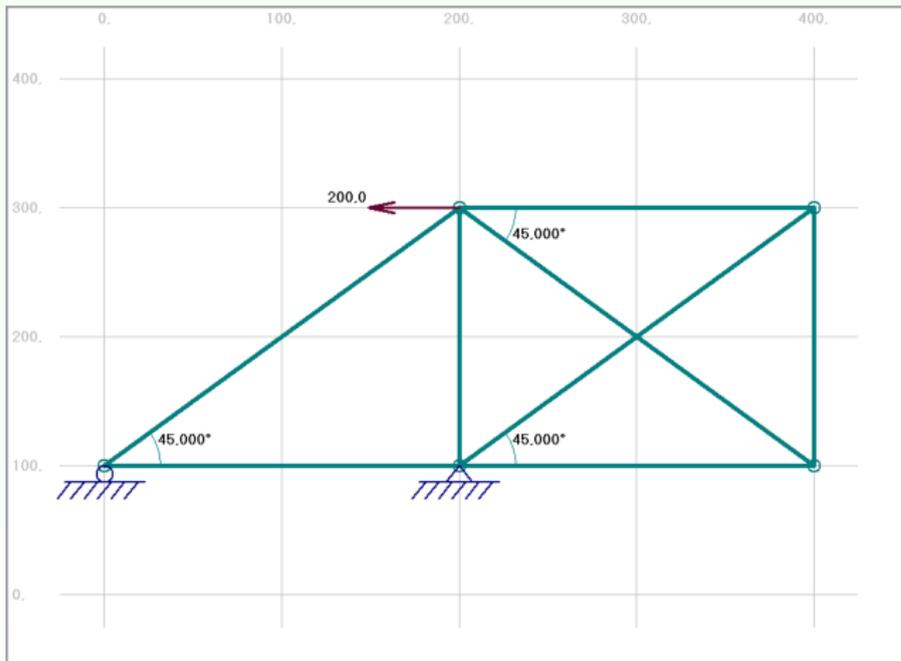
MODELAGEM-FORÇAS

RESULTADOS

EXEMPLO-I

EXEMPLO-II

Alterando a estrutura-II



Alterando a estrutura-II

