

TM 227 - Estática

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Departamento de Engenharia Mecânica
UFPR

TM-227, 2012



TÓPICOS

INTRODUÇÃO

MODELAGEM-GEOMETRIA

MODELAGEM-RESTRICÇÕES

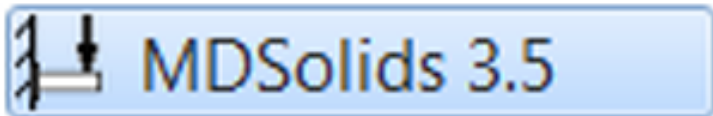
MODELAGEM-FORÇAS

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 white outline.

Windows XP
Windows Vista

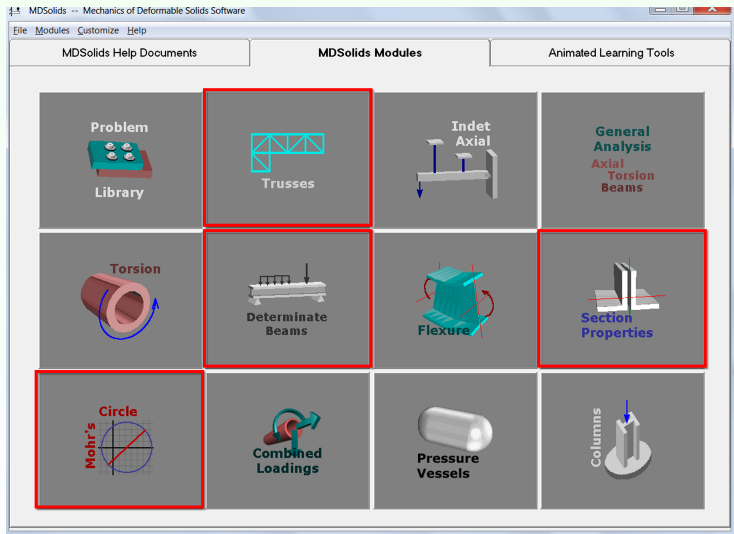
Registered to
Cualquiera

Full version - Single user license

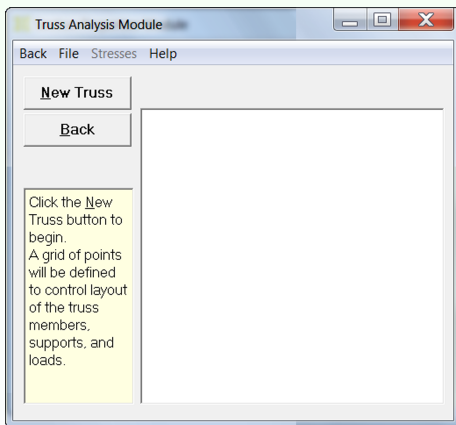
Version 3.5.0

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MDSolids 3.5



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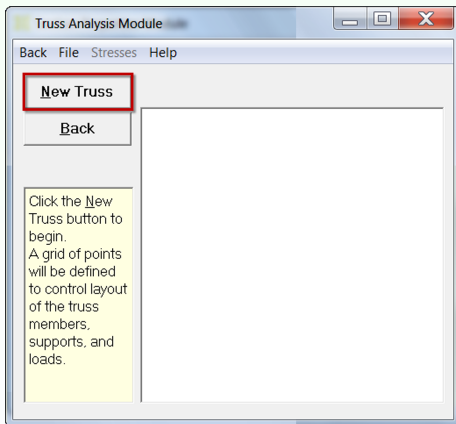
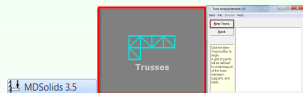
RESULTADOS

EXEMPLO-I

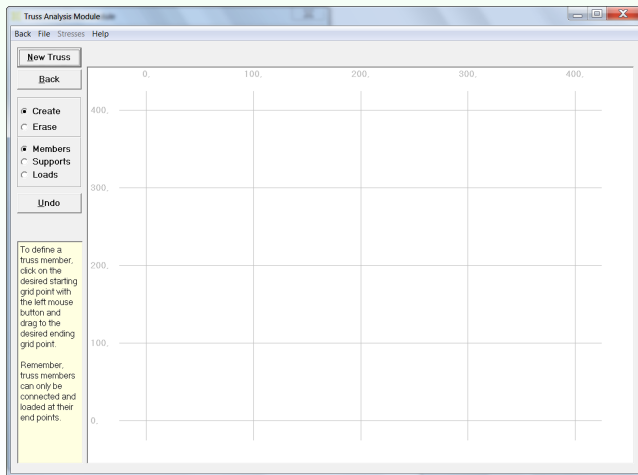
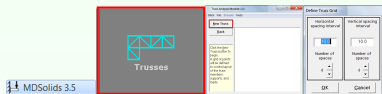
EXEMPLO-II



Definindo a estrutura da treliça

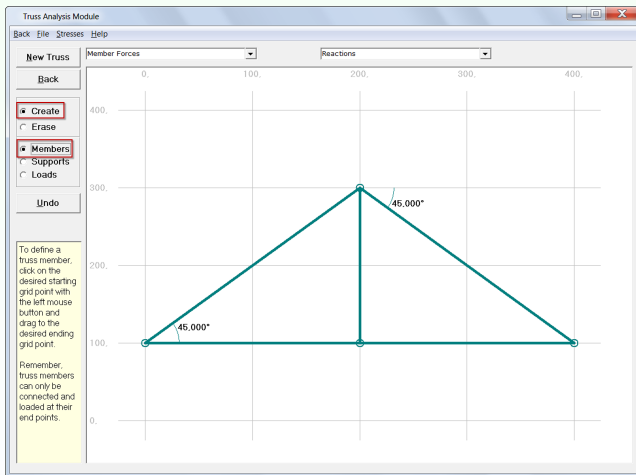
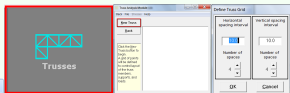


Definindo a estrutura da treliça



Definindo a estrutura da treliça

MDSolids 3.5



TÓPICOS

INTRODUÇÃO

MODELAGEM-GEOMETRIA

MODELAGEM-RESTRIÇÕES

MODELAGEM-FORÇAS

RESULTADOS

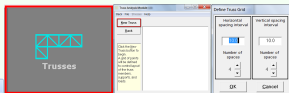
EXEMPLO-I

EXEMPLO-II



Colocando os suportes

MDSolids 3.5



Truss Analysis Module

Back File Stresses Help

New Truss

Back

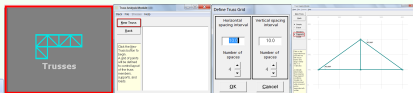
- Create
- Erase
- Members
- Supports**
- Loads

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

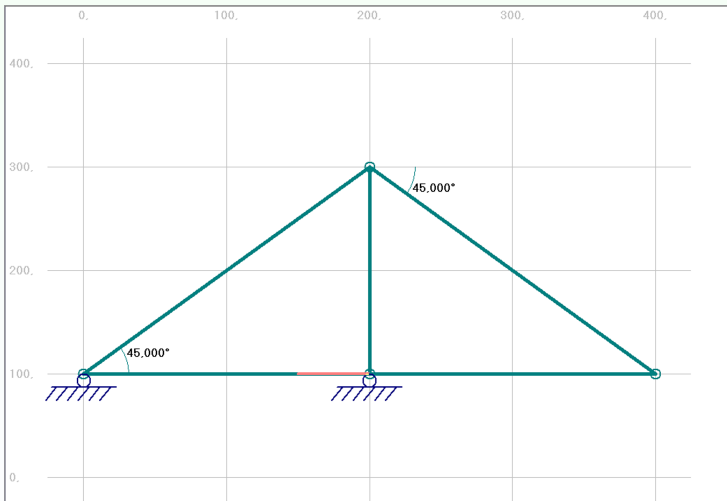
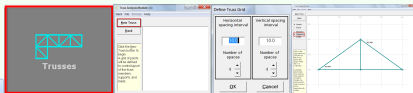
Colocando os suportes

MDSolids 3.5



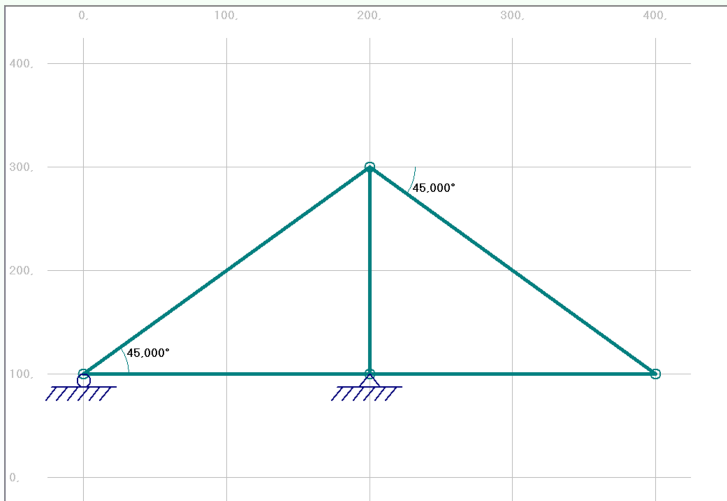
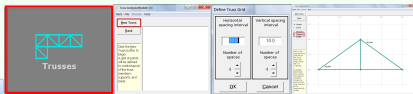
Colocando os suportes

MDSolids 3.5



Colocando os suportes

MDSolids 3.5



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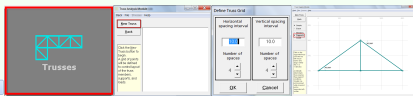
RESULTADOS

EXEMPLO-I

EXEMPLO-II

Estabelecendo as forças

MDSolids 3.5



Truss Analysis Module

Back File Stresses Help

New Truss

Member Forces Reactions

Back

Create
 Erase
 Members
 Supports
 Loads

Define Truss Load

Load Magnitude

(right to left direction)

Enter Load Cancel

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.



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EXEMPLO-II



Computando o resultado

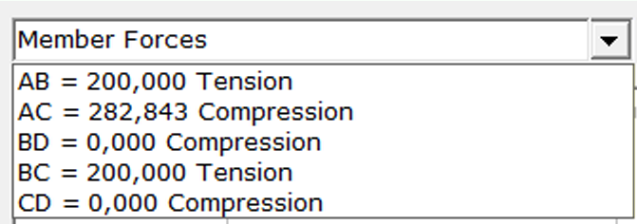


Compute

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

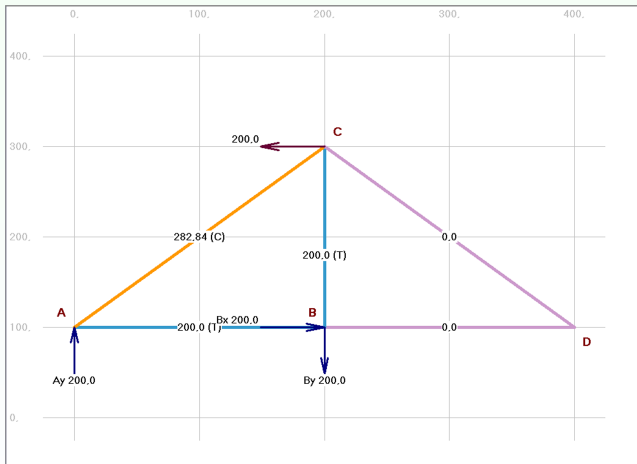
Compute

Member Forces

AB = 200,000 Tension
 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
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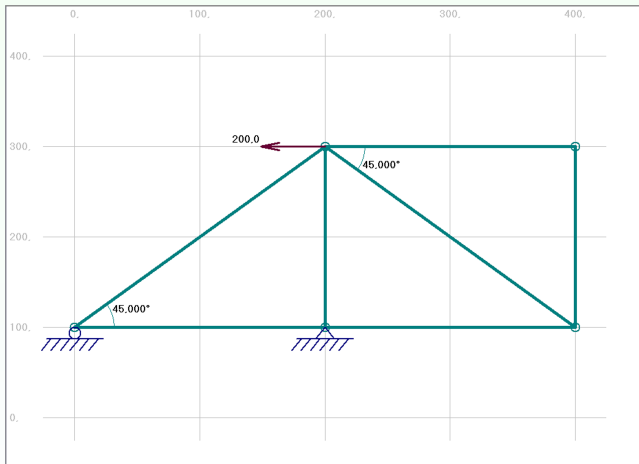
RESULTADOS

EXEMPLO-I

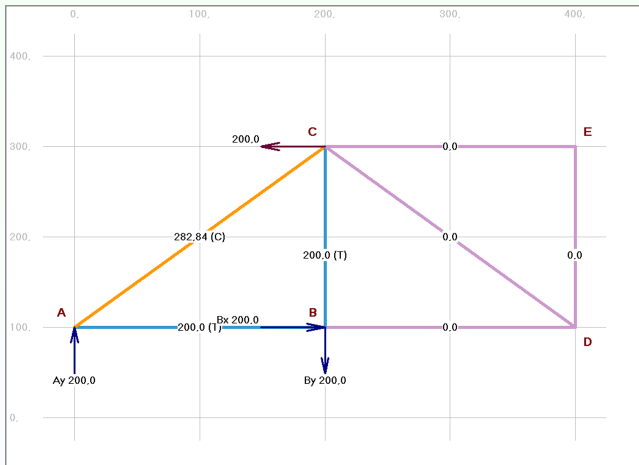
EXEMPLO-II



Alterando a estrutura-I



Alterando a estrutura-I



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MODELAGEM-FORÇAS

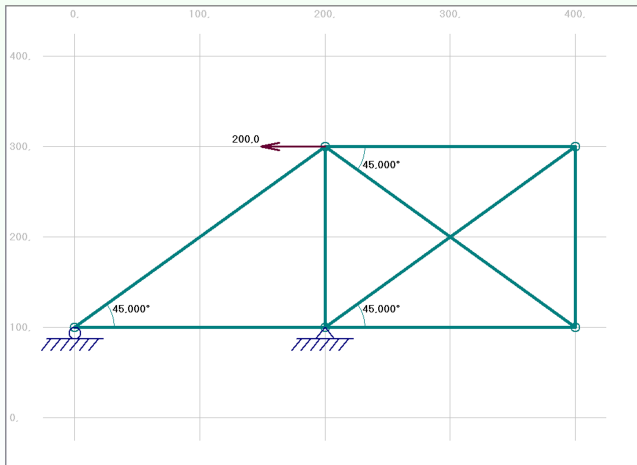
RESULTADOS

EXEMPLO-I

EXEMPLO-II



Alterando a estrutura-II



Alterando a estrutura-II

