


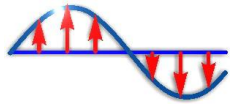


Getting started in Pictures

Siarhei Arlou


Mechanics of Materials
ToolBox for Maple™
Copyright© 2006-2012 S.Arlou

Simply The New Generation CAE software
ORLOVSOFT



Mechanics of Materials™ Toolbox for Maple™

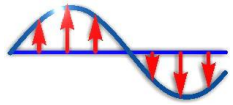


System Requirements:

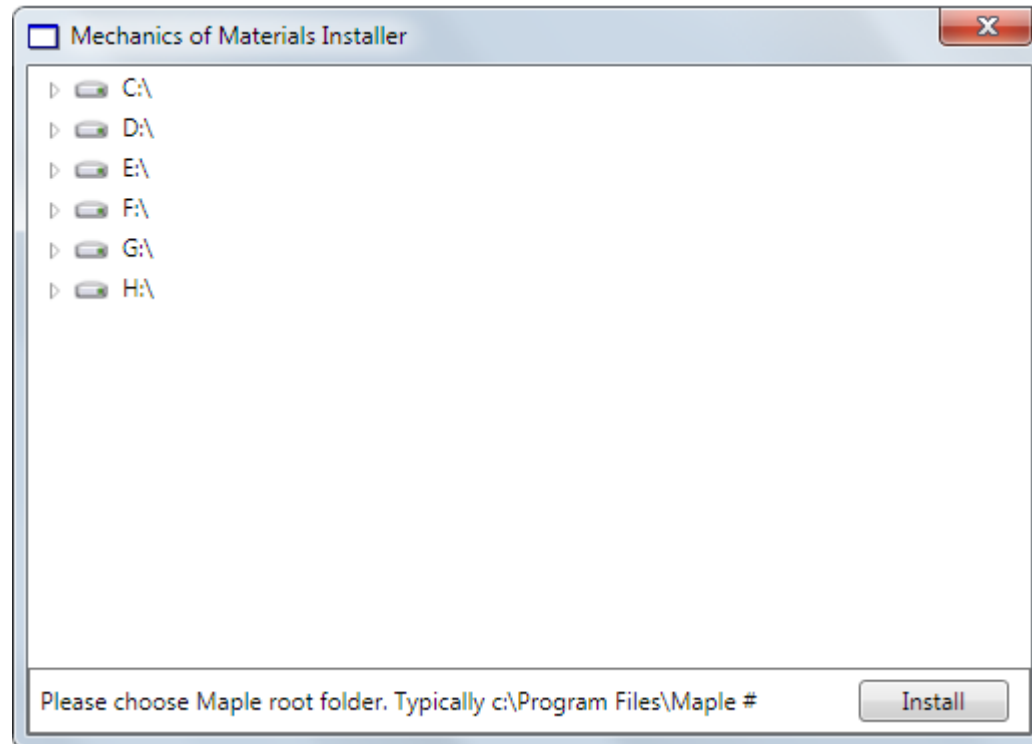
- Windows;
- Microsoft NET 4;
<http://www.microsoft.com/download/en/details.aspx?id=17113>
- Maple 11/12/13/14/15 (Maple 32 bit version only);

Installation Steps

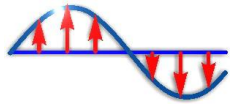
1. Please start downloaded **.exe** file.
2. You will see start installation window like this.



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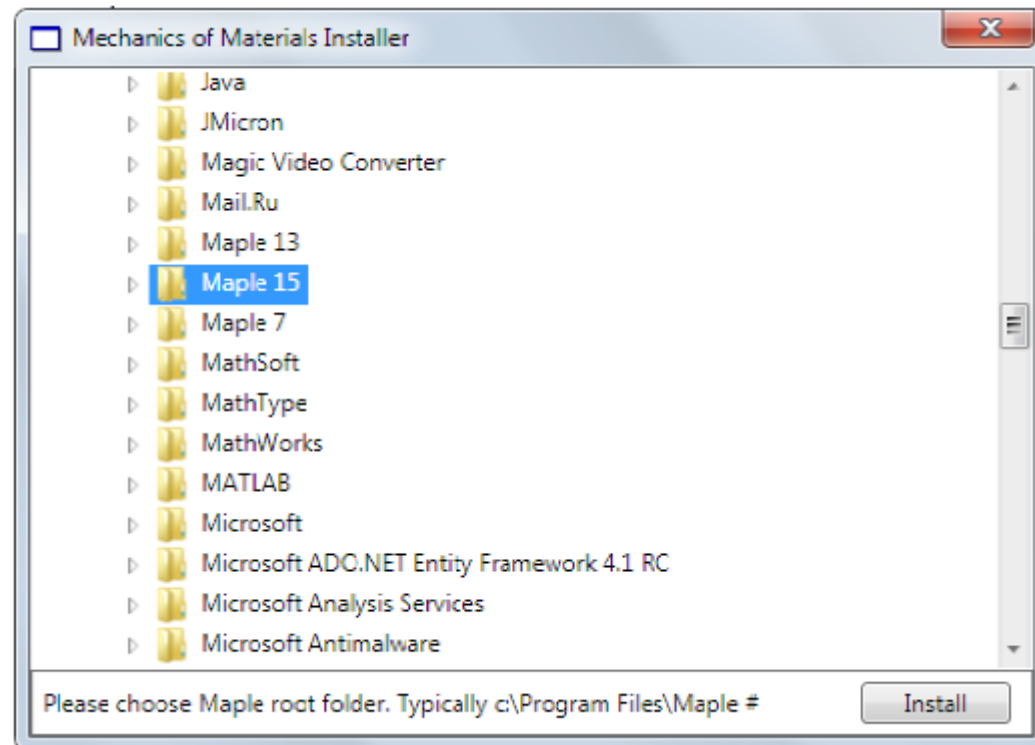


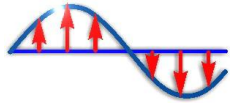
3. Follow usual installation steps.
4. Choose **root** Maple installation folder and click **Install**.



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5. At final stage of installation process you will see **activation** window.





Mechanics of Materials™ Toolbox for Maple™

☐ Mechanics of Materials Installer

**Activation of Mechanics of Materials
Toolbox for Maple**

There are only few simple steps are needed for activation your personal version. Please submit to us on mmtoolbox@orlovsoft.com

1. **PC Hardware ID** (presented below)
2. **Serial Number** (purchased)

We will e-mail to you with individual **activation code**. After getting it start installation again and paste it in empty space for activation code.

Thank for using our software and welcome to our forum for Mechanics of Materials tasks discussion in forum.orlovsoft.com.

Support: support@orlovsoft.com

For Inquiring Trial full-featured activation code feel free to write us.

Hardware ID	1G9DQ/kY7Xjuozna
Activation Code	Put here your activation code

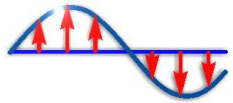
Activate

6. Paste individual activation code and click **Activate**.

7. Installation process is finished.

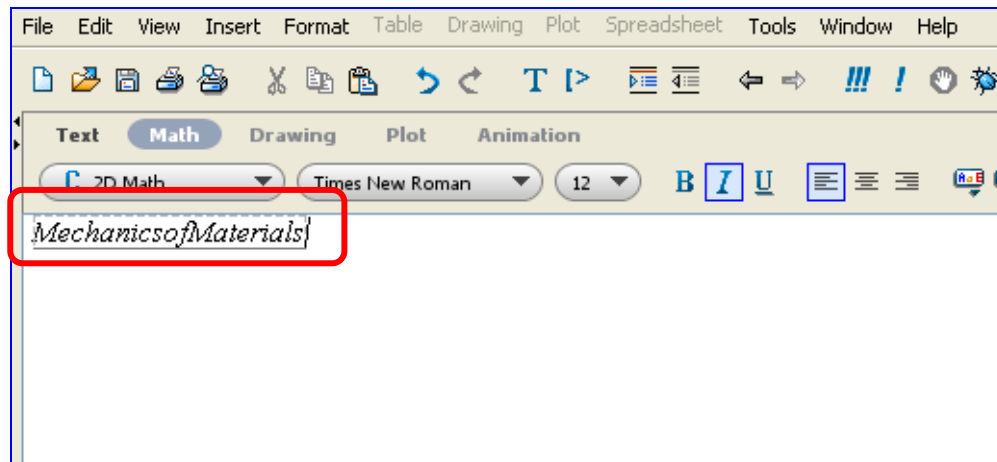
If you have not purchased activation code and you wish to try the software please feel free to ask us **trial activation code** via

mmtoolbox@orlovsoft.com.



Mechanics of Materials™ Toolbox for Maple™

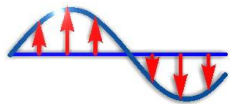
Easy Start



Toolbox Help developed for Maple standard interface only. The beginning with Mechanics of Materials is comfortable by using the examples library located in toolbox **Help**. Also for fast and easy start you may use predefined **Templates**.

Type the **Mechanics of Materials** string by single word.

Please click **F2** button when you are in **Mechanics of Materials** string. Cursor must be within the text, not in start or last letter positions.



Mechanics of Materials™ Toolbox for Maple™

Results of calling of help topic **MechanicsofMaterials** are presented at left part. There is main toolbox help page.

Maple 13 Help - [MechanicsofMaterials]

File Edit View History Help

Search For: ☐ Topic ☐ Text

MechanicsofMaterials

Resources: All

Table of Contents Search Results

- MechanicsofMaterials
- MechanicsofMaterials, Bar Tension
- MechanicsofMaterials, Bar Torsion
- MechanicsofMaterials, Beam Bending
- MechanicsofMaterials, Options
- MechanicsofMaterials, sample01
- MechanicsofMaterials, sample02
- MechanicsofMaterials, sample03
- MechanicsofMaterials, sample04
- MechanicsofMaterials, sample05
- MechanicsofMaterials, sample06
- MechanicsofMaterials, sample07
- MechanicsofMaterials, sample08
- MechanicsofMaterials, sample09
- MechanicsofMaterials, sample10
- MechanicsofMaterials, sample10
- MechanicsofMaterials, Templates, Full Bending
- MechanicsofMaterials, Templates, Full Bending Boundary
- MechanicsofMaterials, Templates, Full Bending Shearing
- MechanicsofMaterials, Templates, Full Bending Winkler
- MechanicsofMaterials, Templates, Full Stretching
- MechanicsofMaterials, Templates, Full Stretching Boundary
- MechanicsofMaterials, Templates, Full Torsion
- MechanicsofMaterials, Templates, Full Torsion Boundary

Mechanics of Materials 2
ToolBox for Maple™

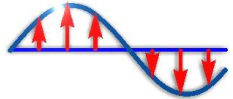
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www.orlovsoft.com
www.maplesoft.com

Developed for Maple Standard Interface Help system

Main Toolbox Help Page
www.orlovsoft.com

Short Toolbox Links

- [Beam Bending Package Examples](#)
- [Bar Tension Package Examples](#)
- [Bar Torsion Package Examples](#)
- [Toolbox Options](#)
- [Full Bending Template](#)
- [Full Bending Boundary Template](#)
- [Full Bending Shearing Template](#)
- [Full Bending Winkler Template](#)
- [Full Stretching Template](#)
- [Full Stretching Boundary Template](#)
- [Full Torsion Template](#)
- [Full Torsion Boundary Template](#)
- [M.M. Free Library Sample 01](#)
- [M.M. Free Library Sample 02](#)
- [M.M. Free Library Sample 03](#)
- [M.M. Free Library](#)



Mechanics of Materials™ Toolbox for Maple™

Fast Toolbox start is using **MM Free Library™** samples.

It is possible to view it by one click in Maple help browser.

Please be patient. Opening the help page in Maple sometimes take a more than one-two seconds.

File Edit View History Help

Search For: ☒ Topic ☐ Text

Mechanics of Materials

Resources: All

Table of Contents Search Results

- Mechanics of Materials
- Mechanics of Materials, Bar Tension
- Mechanics of Materials, Bar Torsion
- Mechanics of Materials, Beam Bending
- Mechanics of Materials, Options
- Mechanics of Materials, sample01
- Mechanics of Materials, sample02
- Mechanics of Materials, sample03
- Mechanics of Materials, sample04**
- Mechanics of Materials, sample05
- Mechanics of Materials, sample06
- Mechanics of Materials, sample07
- Mechanics of Materials, sample08
- Mechanics of Materials, sample09
- Mechanics of Materials, sample10
- Mechanics of Materials, Templates, Full Bending
- Mechanics of Materials, Templates, Full Bending Boundary
- Mechanics of Materials, Templates, Full Bending Shearing
- Mechanics of Materials, Templates, Full Bending Winkler
- Mechanics of Materials, Templates, Full Stretching
- Mechanics of Materials, Templates, Full Stretching Boundary
- Mechanics of Materials, Templates, Full Torsion
- Mechanics of Materials, Templates, Full Torsion Boundary

Mechanics of Materials
MM Free Library™
January 2012

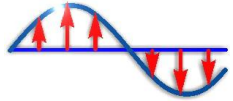
www.orlovsoft.com
www.maplesoft.com

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Siarhei Arlou is independent from Waterloo Maple Inc.
Copyright © 2006-2012 S.Arlou
Maple is trademark of Waterloo Maple Inc.
Maplesoft is a division of Waterloo Maple Inc.

Sample 04

It requires build simulation model of static loading for bending moments and deflections.
Rule of static loading: $(t + 1) \cdot 3 \cdot 10^3 \cdot \sin(4 \cdot z)$.

5 kN/m 2 kNm 3 sin(4z), kN/m 4 kN/m E = 2 · 10¹¹ Pa
Jₓ = 200 · 10⁻⁸ m⁴
2m 8 kN 6m 4m



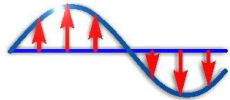
Mechanics of Materials™ Toolbox for Maple™

There is simple way to make a Maple **worksheet** from **help article**. Please follow to view item in main menu and find here point **Open Page As Worksheet**.

Sample 04

It requires build simulation model of static loading for bending moments and deflections.
 Rule of static loading: $(z + 1) \cdot 3 \cdot 10^3 \sin(4 \cdot z)$.

Diagram showing a beam with various loads and supports. The beam is divided into segments of 2m, 6m, and 4m. Loads include a 5kN/m distributed load, a 2kNm point load, an 8kN point load, a 3sin(4z), kN/m distributed load, and a 4kN/m distributed load. Material properties are given as $E = 2 \cdot 10^{11} Pa$ and $J_x = 200 \cdot 10^{-8} m^4$.



Mechanics of Materials™ Toolbox for Maple™

The result is following.
Now we can browse,
calculate and change
Maple Worksheet Document.

File Edit View Insert Format Table Drawing Plot Spreadsheet Tools Window Help

Text Math Drawing Plot Animation

Text Times New Roman 12 B I U = = =

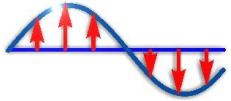
2
Mechanics of Materials
MM Free Library™
January 2012
www.orlovsoft.com
www.maplesoft.com

MM Free Library™ is a free support collection of applications from Siarhei Arlou
Mechanics of Materials™ created by Siarhei Arlou, Orlovsoft
Siarhei Arlou is independent from Waterloo Maple Inc.
Copyright© 2006-2012 S.Arlou
Maple is trademark of Waterloo Maple Inc.
Maplesoft is a division of Waterloo Maple Inc.

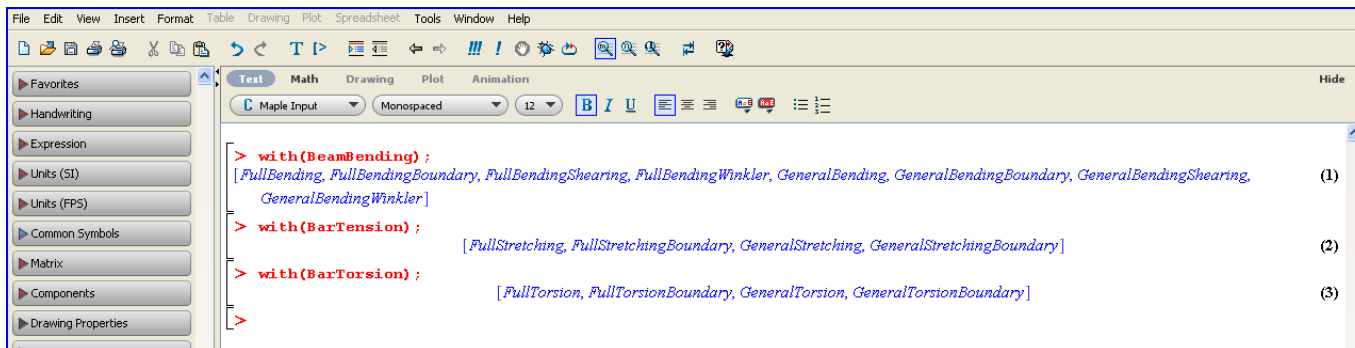
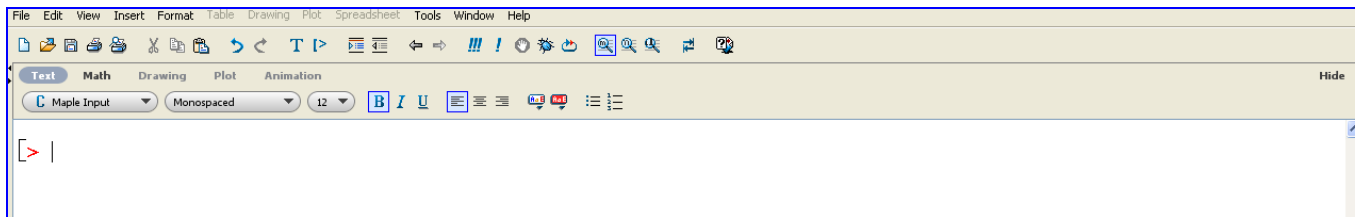
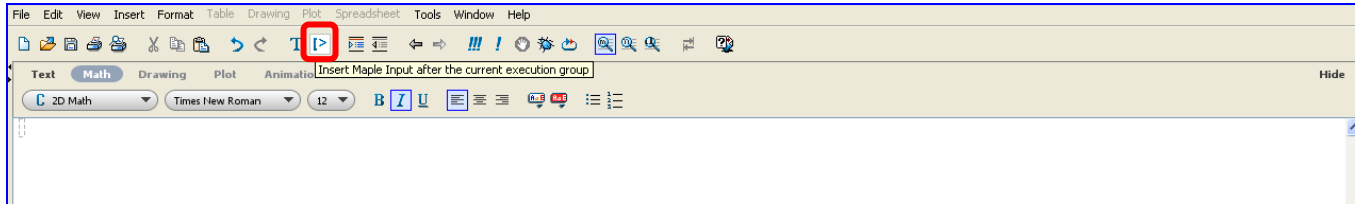
Sample 04

It requires build simulation model of static loading for bending moments and deflections.
Rule of static loading: $(z + 1) \cdot 3 \cdot 10^3 \cdot \sin(4 \cdot z)$.

5 kN/m 2 kNm 3 sin(4z), kN/m 4 kN/m E = 2 · 10¹¹ Pa



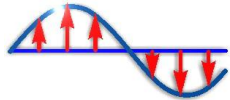
Mechanics of Materials™ Toolbox for Maple™



Maple programming environment gives most powerful opportunities for modeling your own tasks. For using this mode start **Maple session**. Then apply **Ctrl+M** combination – **Maple Worksheet Mode** (not Document Mode).

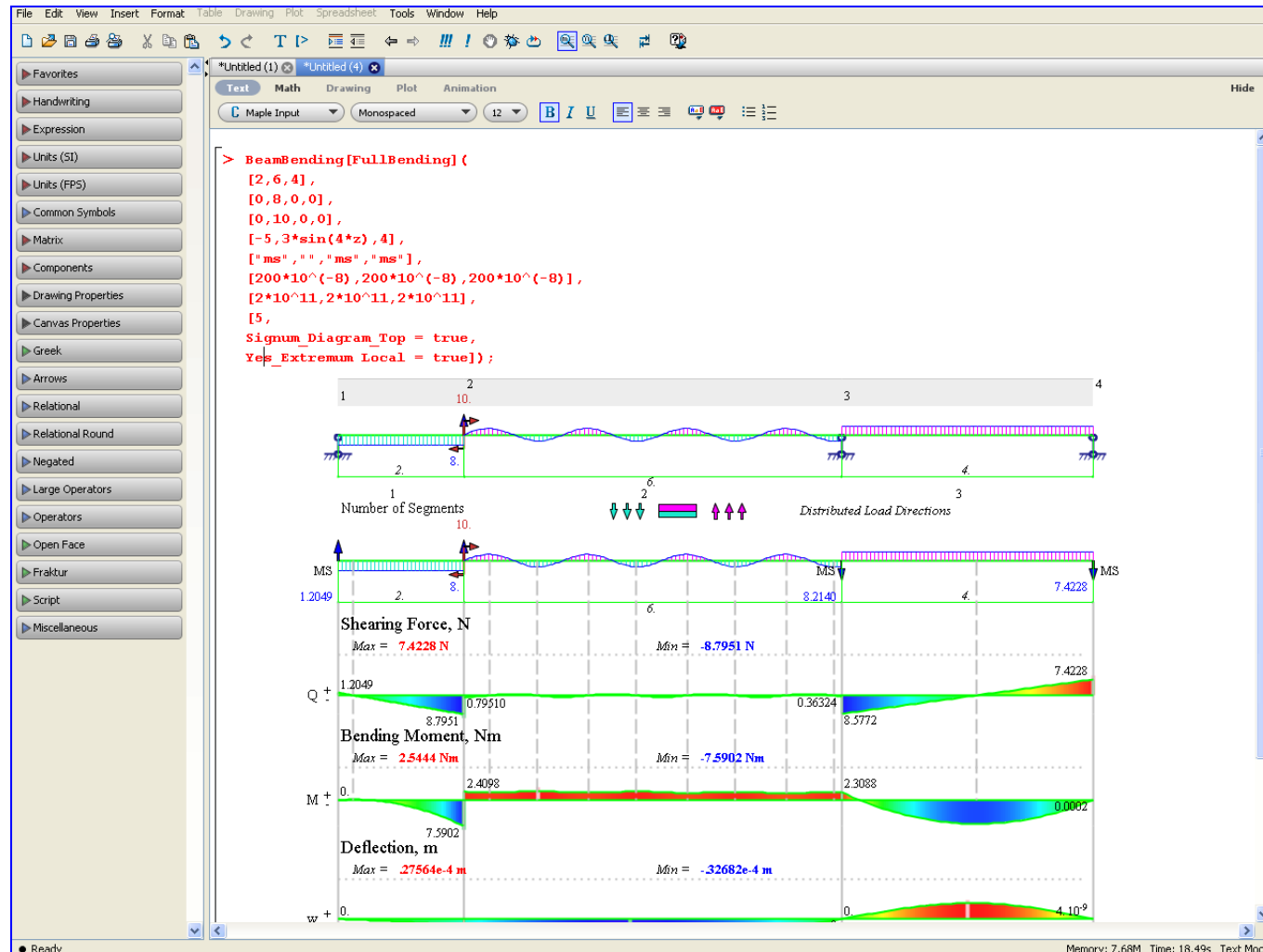
All sixteen functions are available by using next references to toolbox three packages.

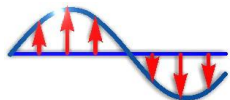
You may use also short form to access to some function by scheme **PackageName [FunctionofPackage] (InputData);**. For detailed information about package functions please see Maple help by topic **with**.



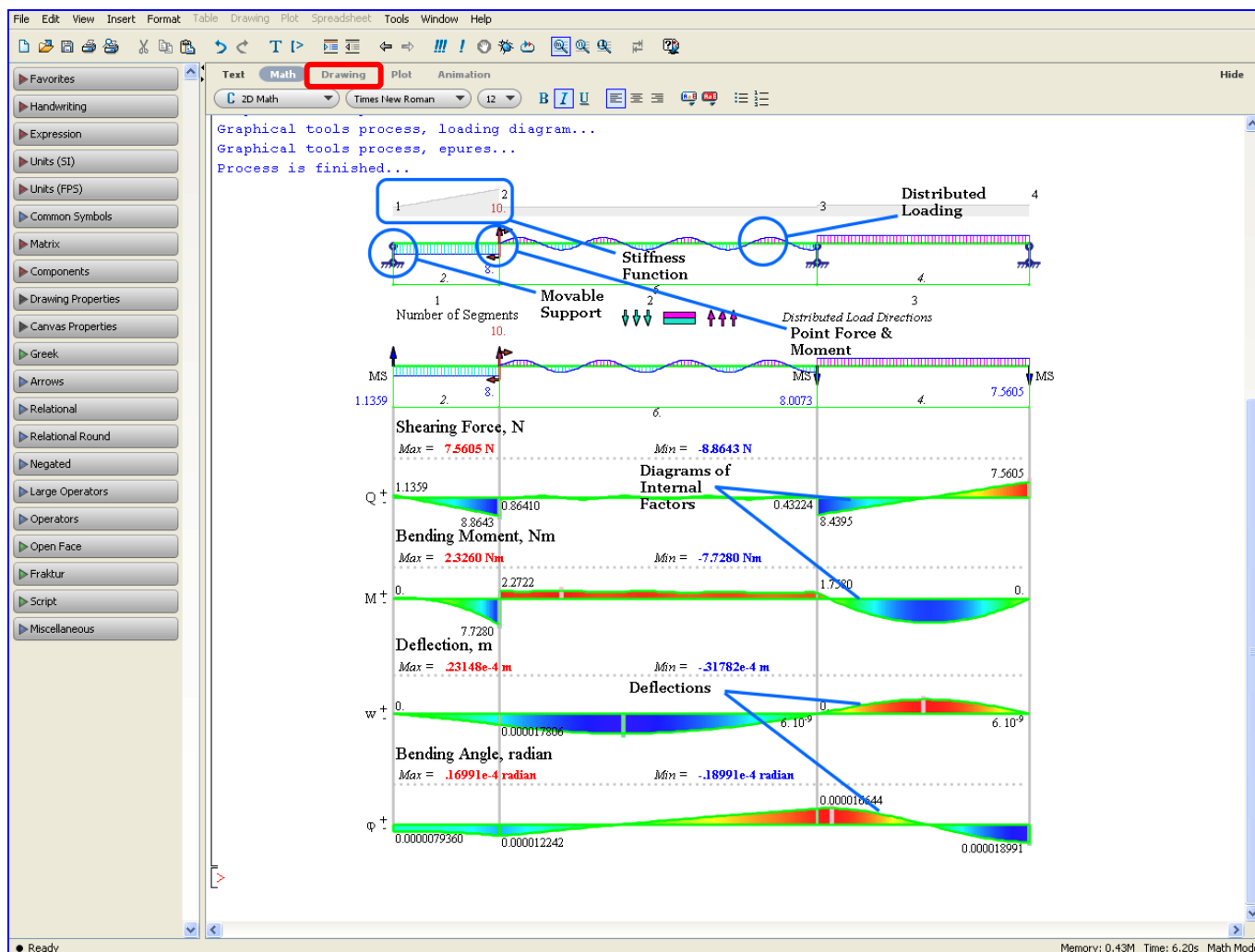
Mechanics of Materials™ Toolbox for Maple™

We can copy some code block from Mechanics of Materials help and paste it to current Maple code session. The result looks like presented.





Mechanics of Materials™ Toolbox for Maple™



Here we used so named **Drawing Mode** to accent few points of results.

Thanks for Mechanics of Materials Toolbox using.