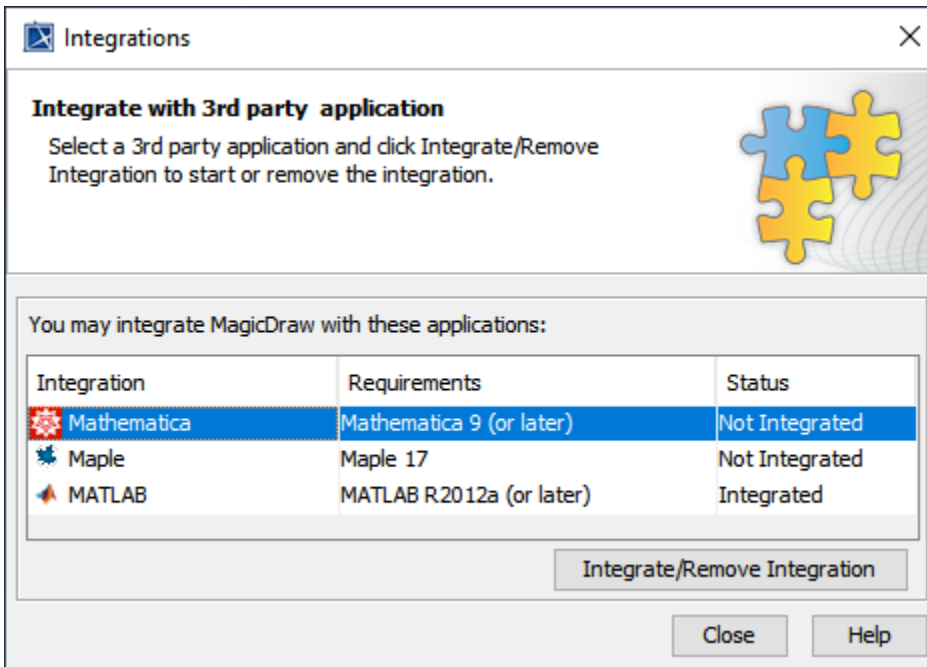# Integration with Mathematica

Cameo Simulation Toolkit supports Mathematica®, a Mathematical computation engine, to analyze and solve Mathematica®l expressions. Once you have installed Mathematica® , you can specify it as the language of opaque expressions.
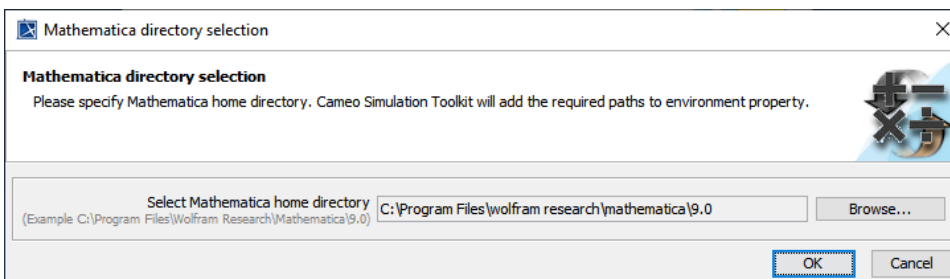
First, you must install Mathematica® on your local machine, and then set up your system to allow Cameo Simulation Toolkit to use the installed Mathematica®.

To use Mathematica® on a 64-bit version of Microsoft Windows and Linux

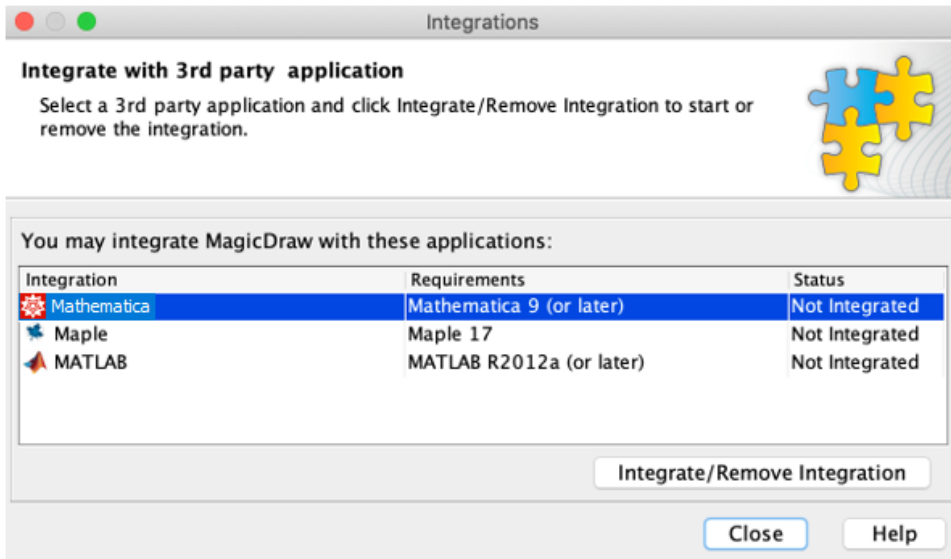1. On the MagicDraw main menu, select **Tools** > **Integrations**. The **Integrations** dialog opens.

2. From the list, select **Mathematica** and click **Integrate/Remove Integration**. The **Mathematica directory selection** dialog opens.
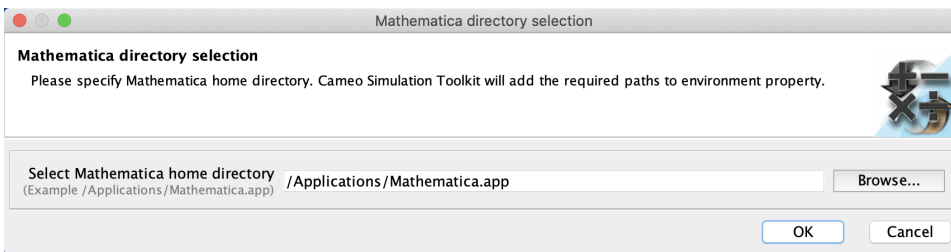

3. Browse for the home directory of Mathematica®.
4. Click **OK** and restart MagicDraw.

To use Mathematica® on Mac OSX

1. From the main menu, click **Tools** > **Integrations**. The **Integrations** dialog opens.

2. From the list, select **Mathematica** and click **Integrate/Remove Integration**. The **Mathematica directory selection** dialog opens.

3. Specify the directory where you have installed Mathematica® and click **OK**.
4. Restart the modeling tool.

> ### ⓘ Information
>
> (Only for integration with Mathematica **Version 12.3** or later) After completing the steps above using the **Integration** dialog, you must change **JAVA_HOME** to **JDK 17** by following the steps below:
>
> 1. Go to *https://adoptium.net/temurin/releases/* and download JDK 17 (17.0.8 recommended) for your operating system.
> 2. Open the *<install_root>/bin/<modeling_tool_name>.properties* file (e.g., *magicdraw.properties*) with a text editor.
> 3. Change **JAVA_HOME** to the **JDK 17** directory and save the file, for example:
>
> ```
> JAVA_HOME=C\:\\Program Files\\Eclipse Adoptium\\jdk-17.0.8
> ```
>
> 4. Restart the modeling tool.