

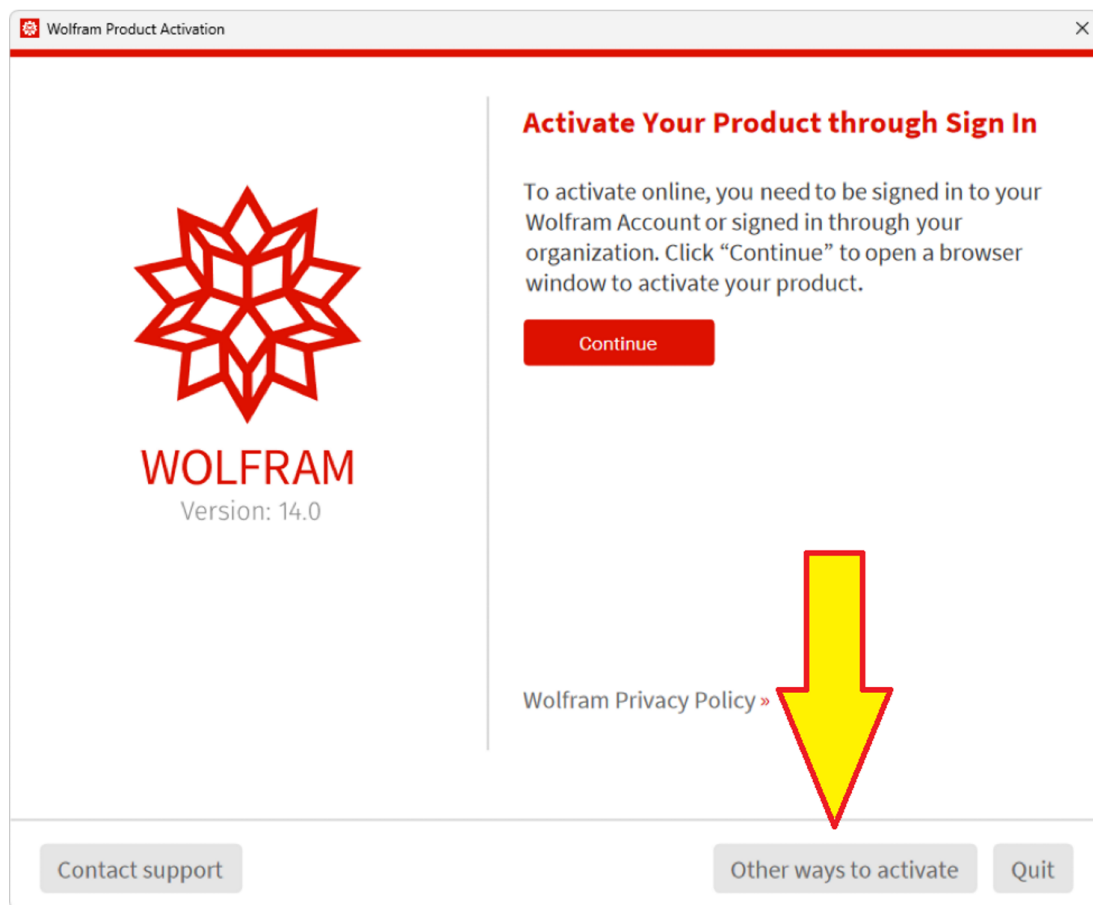
# FAQ : Using Mathematica

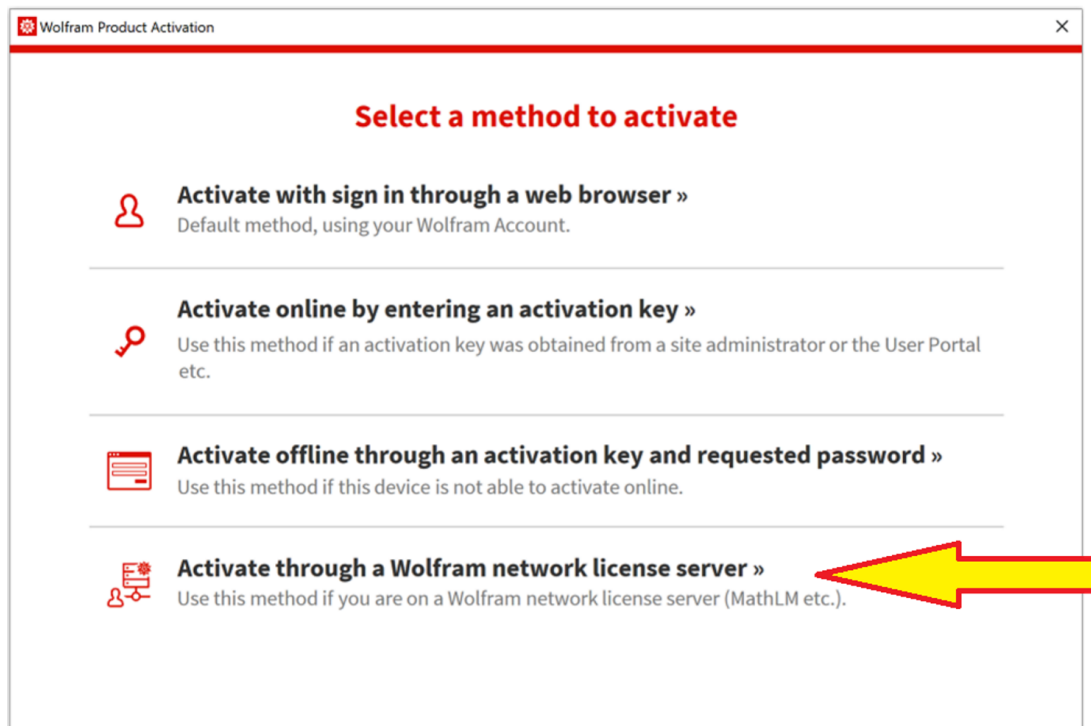
## Introduction

1. Download the appropriate installation file here: <http://go.southern.edu/mathematica>

During installation or the first time you run Mathematica, select:

- Other ways to activate
- Activate through a Wolfram network license server





Then input: Server name **mathematica.southern.edu**

Note: Our license allows Mathematica to be installed on any computer owned by Southern or by any student, faculty/staff member. Once you have input our license server address the first time, you should be able to just hit <Enter> to (occasionally) reconnect. Usually reconnection is automatic. Please let me know if you have any difficulties. In fact, let me know if you are successful, too. <grin!>

2. (Alternative method) If you don't have enough disk space for Mathematica, you may use a Wolfram Cloud account to run Mathematica in the Cloud from a memory-poor or storage-space-poor device:

- Go to <https://www.wolframcloud.com/>, and/or or get the app: <https://www.wolfram.com/cloud-app/>

- Log in with your southern.edu email address.

- At least ONE TIME, go to <https://user.wolfram.com/>, log in using your southern.edu email address, and complete the registration form, indicating student status and expected graduation date. Submit the form.

- When you go back to Wolfram Cloud, after perhaps a short delay, you should see that "Plan: BASIC" in the middle of the top menu bar has changed to "Plan: Southern Adventist University". This allows you to drag and drop files from your computer to/from your Wolfram Cloud folders.

Note that this will be much slower than having a local installation. We only have 25 licenses, so students using iPads in classes where Mathematica is used will have priority.

3. Here is a series of tutorials gives the basics of using many different features of Mathematica:

<https://www.wolfram.com/broadcast/screencasts/handsonstart/>

4. A few ideas for getting started:

After "=", type in English what you want to do. Learn from Mathematica how to use Mathematica!

Use <Shift>-<Enter> to execute commands.

Click any word and hit <F1> to get specific help on that topic, format of commands, live examples.

Common tasks: graphing (Plot, Plot3D, ContourPlot), solving equations & systems of equations (Solve), taking the derivative or integral (D, Integrate).

Out[ ]=

Ex/	Plot[x * Cos[x], {x, -38, 38}]
	Plot3D[x * y * Cos[x] * Cos[y], {x, -10, 10}, {y, -10, 10}]
	Solve[{2x + 3y == 5, x <sup>2</sup> - y <sup>2</sup> == 8}]
	Solve[ax <sup>2</sup> + bx + c == 0, x]
	D[xE <sup>x<sup>2</sup></sup> , x]
	Integrate[%, x]

Two common SSS-related commands (needs the latest SSS program loaded):

1. SSS[ruleset, initial state, number of steps, options]. Ex/ SSS[{"AA"→"B", "BA"→"AB", ""→"A"}, "AAAAA", 50]

(a couple of common options: NetSize→200, HighlightMethod→Dot)

2. FromReducedRankIndex[n] (gives the n-th SSS ruleset)

Ex/ The first ruleset in the reduced enumeration:

In[152]:=FromReducedRankIndex[1]

Out[152]={“” -> “A”}

Ex/ The first 1000 rulesets:

FromReducedRankIndex/@Range[1, 1000]

FAQ Sessie Intro, 2025.2.12, Kenneth Caviness and Colton Edelbach