

Access Mathematica and first experiments

1 Get access

There are two methods to get access to Mathematica.

Method 1: (cloud based, no installation required)

- Go to <https://byuapps.cloud.com/>
- Sign in with your Net ID. Make sure to include '@byu.edu' at the end.
- On the left panel, click on Apps, then All Apps. Scroll down to locate Wolfram Mathematica.

Method 2: (installation on your own computer)

- Go to <https://software.byu.edu/mathematica>
- Click on platform (Window or Mac) that is compatible with your computer. The download will start.
- Meanwhile, click on the link 'Product Key'. It will take you to the Sign-in/ Sign-up page. Create a Wolfram Alpha account if you haven't had one. Make sure to use your NetId@byu.edu email to sign up.
- Check your BYU email. You should receive an activation code from Wolfram Customer Support.

2 First experiments

- (1) Type $35/6$, then Shift+Enter.
- (2) Type $N[35/6]$ (note: square brackets), then Shift+Enter.
- (3) Type $Sqrt[2]$ (note: capitalized S). Shift+Enter.
- (4) Type $N[%]$. Shift+Enter.
- (5) Type $Sin[Pi]$ (note: capitalize S and P). Shift Enter.
- (6) Type $34^100;$ (note: semicolon). Shift Enter.
- (7) Type 34^100 (note: without semicolon). Shift Enter.

At this point, you may have noticed that the function N is to evaluate an expression in decimal-point form. Each function's name is capitalized and used with square brackets (not parenthesis as we normally do on paper). The semicolon is to hold the output. One uses it when output is too long or not of interest. Next, try the following:

- (8) $Exp[1]$. Shift+Enter.
- (9) $Log[2]$. Shift+Enter.
- (10) $f[x_] := Sin[x]+Cos[x]$ (note: the dash after x). Shift+Enter.

(11) `f[Pi]+f[Pi/4]`. Shift+Enter.

(12) `Clear[f]`. Shift+Enter.

(13) `f[Pi]+f[Pi/4]`. Shift+Enter.

The natural logarithm function is named `Log` in Mathematica (not `ln`). `Exp` is the exponential function. The third command is to define a function. The dash is required in order to tell Mathematica that we are defining the function f . The function `Clear` is to remove a defined variable from the memory. Next, try the following:

(14) `Plot[Sin[x], {x,0,2*Pi}]`. Shift+Enter.

(15) `Plot[Sin[x], {x,0,2*Pi}, Filling->Axis]`. Shift+Enter. Note: the arrow is typed as `->`.

(16) `f[x_] := Sin[x]+Cos[x]`. Shift+Enter.

(17) `Plot[f[x], {x,0,2*Pi}, Filling->Axis]`. Shift+Enter. Note: the dash after x is no longer used after the definition of f .