

```
In[ ]:= Basic Calculations
224 / 24 248
/* Press Shift + Enter to obtain the Output */
```

```
Out[ ]:= Basic Calculations
```

$$\frac{4}{433}$$

```
In[ ]:= Denominator  $\left[\frac{4}{433}\right]$ 
```

```
Out[ ]:= 433
```

```
In[ ]:= N[224 / 24 248, 10]
/* Basically, calculating it's value in decimal upto 10 th digit */
```

```
Out[ ]:= 0.009237875289
```

```
N[%13, 10]
/* Here %13 refers to the Input cell with no. 13 */
```

```
Out[ ]:= 0.009237875289
```

```
In[ ]:=  $\begin{pmatrix} 1 & 2 \\ 3 & 4 \end{pmatrix}$ 
```

```
Out[ ]:= {{1, 2}, {3, 4}}
```

```
* In Mathematical terms a matrix is just a list of a list. * /
```

```
In[ ]:= Inverse[%]
/* This command generated the Inverse Matrix of
the given Matrix. The % sign refers to the previous input */
```

$$\left\{ \{-2, 1\}, \left\{ \frac{3}{2}, -\frac{1}{2} \right\} \right\}$$

```
In[ ]:= N[% , 3]
```

```
Out[ ]:= {{-2.00, 1.00}, {1.50, -0.500}}
```

```
// Use Ctrl + 5 to open up a new section.
```

---

## Variable Assigner

```
In[ ]:= a = 32 / 7
// This is how we assign value to variable in Wolfram.
```

$$\frac{32}{7}$$

```
In[ ]:= N[a, 8]
```

```
Out[ ]:= 4.5714286
```

```
In[*]:= N[a^(2), 5]
```

```
Out[*]= 20.898
```

```
N[√a, 5]
```

```
/* Ctrl + 2 brings the square root symbol. You can also use Sqrt[number_or_variable] * /
```

```
Out[*]= 2.1381
```

## Creating Functions

```
In[*]:= f[x_] := x^(2) + x + 1
```



```
/* This is how we define a mathematical
```

```
function here f[independentvariable_] := and the formula * /
```

```
In[*]:= f[5]
```

```
Out[*]= 31
```

```
In[*]:= f[b + 5]
```

```
Out[*]= 6 + b + (5 + b)^2
```

```
In[*]:= Expand[%]
```

```
Out[*]= 31 + 11 b + b^2
```

```
In[*]:= f[num]
```

```
Out[*]= 1 + num + num^2
```

```
In[*]:= Solve[f[b] - 2 == 0, b]
```



```
/* Now, when it comes to solving an equation here, here 's how we do it. * /
```

```
Out[*]= {{b -> 1/2 (-1 - √5)}, {b -> 1/2 (-1 + √5)}}
```

```
In[*]:= /* And hence, we got a solution for this. * /
```



```
In[*]:= NSolve[f[b] - 2 == 0, b]
```

```
Out[*]= {{b -> -1.61803}, {b -> 0.618034}}
```