

Sophisticated Prints

E:\Tutorials\udemy\math-with-python\pythonPrinting\Sophisticated Prints.docx

E:\Tutorials\udemy\math-with-python\pythonPrinting

PrettyPrint1.py

```
# -*- coding: utf-8 -*-
```

```
''''
```

```
Created on Fri Dec 13 09:13:10 2019
```

```
@author: bedri
```

```
''''
```

```
from IPython.display import Math,display
```

```
import sympy as sym
```

```
sym.init_printing()
```

```
#define symbolic variables
```

```
x,y,z = sym.symbols('x,y,z')
```

```
ex = x**y*x**z
```

```
ez=sym.simplify(ex)
```

```
#input real values
```

```
d=2.3
```

```
p=3.2
```

```
q=2.3
```

```
#compute real solution
```

```
value=d**(p+q)
```

```
display(Math("for:(x = {0:}, y = {1:}, z = {2:}) : {3:} = {4:10.5f}".format(d,p,q,sym.latex(ez), value)))
```

Run with Spyder (Anaconda 3)

jupyter notebooks:

```
for:(x=2.3,y=3.2,z=2.3): x^(y + z) =97.61197
```

PrettyPrint2.py

```
# -*- coding: utf-8 -*-
```

```
"""
```

```
Created on Sat Dec 7 16:06:47 2019
```

```
@author: Prof.Dr. Bedri Doğan Emir
```

```
"""
```

```
import math
```

```
from IPython.display import Math,display
```

```
q = "{0:0.2f}".format(math.sqrt(7))
```

```
display(Math("\sqrt{7} = " + str(q)))
```

Result(Notebooks):

$$\sqrt{2} = 2.65$$

PrettyPrint3.py

```
# -*- coding: utf-8 -*-
```

```
"""
```

```
Created on Sat Dec 7 18:15:41 2019
```

@author: bedri

"""

```
import IPython, math
```

```
from IPython.display import Math
```

```
q = "{0:0.2f}".format(3**5)
```

```
display(Math("\\ 3^5 = "+ q))
```

Result(Notebooks):

$3^5 = 243$

```
#E:\Tutorials\udemy\math-with-python\latexprint.py
```

```
#E:\Tutorials\udemy\math-with-python\latexprint.py
```

```
# -*- coding: utf-8 -*-
```

```
Created on Sat Dec 7 16:06:47 2019
```

```
@author: Prof.Dr. Bedri Doğan Emir
```

```
How to print outputs in Latex in an always  
working method.
```

```
"""
```

```
from IPython.display import display, Math
```

```
x = 5; y = 5.1
```

```
expression2 = "{0: 10.2f}".format(x**(3/4)*4**y)
```

```
display(Math("x^{\frac{3}{4}} \times 4^y = " + expression2))
```

Result : (Notebook)

$$x^{\frac{3}{4}} \times 4^y = 3933.09$$

Latexprint.py

```
#E:\Tutorials\udemy\math-with-python\latexprint.py
```

```
# -*- coding: utf-8 -*-
```

```
#Created on Sat Dec 7 16:06:47 2019
```

```
#@author: Prof.Dr. Bedri Doğan Emir
```

```
#How to print outputs in Latex in an always working method.
```

```
from IPython.display import display, Math
```

```
x = 5; y = 5.1
```

```
expression2 = "{0: 10.2f}".format(x**(3/4)*4**y)
```

```
display(Math("x^{\frac{3}{4}} \times 4^y = " + expression2))
```

End of the program

Result in Spyder 4 Anaconda)

$$x^{\frac{3}{4}} \times 4^y = 3933.09$$

Latexprint2.py

```
# -*- coding: utf-8 -*-
#E:\Tutorials\udemy\math-with-python\latexprint2
#Created on Sat Dec 7 16:06:47 2019

#author: Prof.Dr. Bedri Doğan Emir

#How to print outputs in Latex in an always working method.

import math
from IPython.display import Math,display

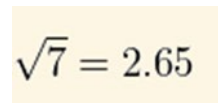
#importlib.import_module('IPython.display')

q = "{0:0.2f}".format(math.sqrt(7))

display(Math("\sqrt{7} = " + str(q)))
```

End of the program

Result in Spyder 4 Anaconda)


$$\sqrt{7} = 2.65$$

Latexprint3.py

```
# -*- coding: utf-8 -*-
```

```
#Created on Sat Dec 7 16:06:47 2019
```

```
#@author: Prof.Dr. Bedri Doğan Emir
```

```
#How to print outputs in Latex in an always working method.
```

```
import importlib
```

```
import math
```

```
from IPython.display import Math,display
```

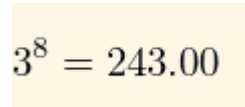
```
#importlib.import_module('IPython.display')
```

```
q = "{0:0.2f}".format(3**5)
```

```
display(Math("\ 3^8 = " + str(q)))
```

End of the program

Result in Spyder 4 Anaconda)



```
38 = 243.00
```

LatexOldFormat.py

```
# -*- coding: utf-8 -*-
```

```
# Created on Sun Dec 8 14:02:13 2019
```

```
# @author: Prof. Dr. Bedri Doğan Emir
```

```
# LatexOldFormat.py at E:\Tutorials\udemy\math-with-python
```

```
import IPython,math
from IPython.display import Math,display
x = int(input("x="))
y = int(input("y="))
sw = int(input("Please enter 1 for x**y or 2 for x/y,\n Your Choice = "))
if sw == 1:
    display(Math("\\ x^y = %g" %x**y ))
if sw == 2:
    #10ans = "{0:0.2f}".format(x/y)
    display(Math("\\frac{x}{y} = %g" %(x/y)))
    #display(Math("\\frac{x}{y} = {0:0.2f}".format(x/y)))
```

End of the program

Results in Spyder 4 Anaconda)

(for x= 2 , y = 3 , choice = 1)

$$x^y = 8$$

(for x= 2 , y = 3 , choice = 2)

$$\frac{x}{y} = 0.666667$$

LatexNewFormat.py

```
import IPython,math
from IPython.display import Math
x = int(input("x="))
y = int(input("y="))
sw = int(input("Please enter 1 for x**y or 2 for x/y,\n Your Choice = "))
if sw == 1:
    ans = "{0:0.2f}".format(x**y)
    display(Math("\ x^y = "+ ans ))
if sw == 2:
    ans = "{0:0.2f}".format(x/y)
    display(Math("\frac{x}{y} = "+ ans))
```

End of the program

Results in Spyder 4 Anaconda)

(for x= 2 , y = 3 , choice = 1)

$$x^y = 8.00$$

(for x= 2 , y = 3 , choice = 2)

$$\frac{x}{y} = 0.67$$

prettyprint1.py


```

# -*- coding: utf-8 -*-
#E:\Tutorials\udemy\math-with-python\pythonPrinting\prettyprint1.py

#Created on Fri Dec 13 09:13:10 2019

#@author: bedri

from IPython.display import Math,display
import sympy as sym
sym.init_printing()
#define symbolic variables
x,y,z = sym.symbols('x,y,z')
ex = x**y*x**z
ez=sym.simplify(ex)
#input real values
d=2.3
p=3.2
q=2.3
#compute real solution
value=d**(p+q)
display(Math("for:(x = {0:} , y = {1:} , z = {2:}) : {3:} = {4:10.5f}".format(d,p,q,sym.latex(ez),
value)))

```

End of the program

Results in Spyder 4 Anaconda)

```
for : (x = 2.3, y = 3.2, z = 2.3) :  $x^{y+z} = 97.61197$ 
```

prettyprint2.py

```
# -*- coding: utf-8 -*-  
#E:\Tutorials\udemy\math-with-python\pythonPrinting\prettyprint2.py  
  
#Created on Fri Dec 13 09:13:10 2019  
  
#@author: bedri  
  
from IPython.display import Math,display  
import sympy as sym  
sym.init_printing()  
#define symbolic variables  
x,y,z = sym.symbols('x,y,z')  
ex = (x**(y+z))/(y+z)  
ez=sym.simplify(ex)  
#define actual variables  
#input real values  
d=2.3  
p=3.2  
q=2.3  
#compute real solution  
value=(d**(p+q))/(d+p)  
display(Math("for:(x = {0:} , y = {1:} , z = {2:}) : {3:} = {4:10.5f}".format(d,p,q,sym.latex(ez),  
value)))
```

End of the program

Results in Spyder 4 Anaconda)

$$\text{for : } (x = 2.3, y = 3.2, z = 2.3) : \frac{x^{y+z}}{y+z} = 17.74763$$