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)

$x^{\frac{3}{4}}$ X 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)

$$3^8 = 243.00$$

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)

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