Python Cheat Sheet

by lucidxtra via cheatography.com/145546/cs/31365/

Math Operations

a = 3	
b = 4	
a + b	Sum a and b (7)
a - b	Subtract b from a (-1)
a * b	a times b (12)
a / b	a divided by b (0.75)
a // b	Integer part of a divided by b (0)
a % b	Rest of a divided by b (3)
a ** b	a to the power of b (81)

Logic Tests

5 > 3	Tests if 5 is greater than 3 (True)
5 >= 3	Tests if 5 is greater than or equal to 3 (True)
5 == 3	Tests if 5 is equal to 3 (False)
5 != 3	Tests if 5 is different than 3 (True)
5 <= 3	Tests if 5 is lower than or equal to 3 (False)
5 < 3	Tests if 5 is lower than 3 (False)
not True	Opposite of True (False)

Math Module

import math	Imports module math
math.ceil(x)	Rounds x up
math.floor(x)	Rounds x down
round(x)	Rounds x with 0 decimal places
round(x, 2)	Rounds x with 2 decimal places
math.sqrt(x)	Square root of x
math.sin(-angle)	Sine of angle
math.cos(-angle)	Cosine of angle
math.tan(-angle)	Tangent of angle
math.sinh(x)	Hiperbolic sine of x
math.cosh(x)	Hiperbolic cosine of x
math.tanh(x)	Hiperbolic tangent of x
math.asin-(angle)	Arc sine of angle
math.acos-(angle)	Arc cosine of angle
math.atan-(angle)	Arc tangent of angle
math.asinh(x)	Inverse hiperbolic sine of x

Math Module (cont)

math.a-cosh(x)	Inverse hiperbolic cosine of x
math.a-tanh(x)	Inverse hiperbolic tangent of x
math.degr-ees(angle)	Covert rad_angle from radians to degrees
math.radi-ans(angle)	Covert rad_angle from degrees to radians
math.factori-al(x)	Factorial of x
math.g-amma(x)	Gamma function of x
math.exp(x)	e to the power of x
math.log(x)	Natural logarithm of x
math.log(x, 2)	Base 2 logarithm of x
math.e	Constant e
math.pi	Constant pi

Round is not part of the math module.

The python standard is to work with angles in radians.

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Second Degree Equation Roots

```
# This script solves ax^2 + bx +
c = 0
import math
a = 1
b = -1
c = -6
delta = b2 - 4 ac
r1 = (-b + math.s qrt (de -
lta ))/ (2*a)
r2 = (-b - math.s qrt (de -
lta ))/ (2*a)
print( f"r1 = {r1}")
print( f"r2 = {r2}")
```

r1 = 3.0
r2 = -2.0

Triangle Angles

```
# Calculates the angles of a
triangle based on its
sides.
import math
side1, side2, side3 = 3, 4, 5
angle1 = math.a tan (si -
de2 /side1)
angle2 = math.a cos (si -
de2 /side3)
print( f"angle 1 = {math.d eg -
ree s(a ngl e1) }")
print( f"angle 2 = {math.d eg -
ree s(a ngl e2) }")
```

angle 1 = 53.13010235415598
angle 2 = 36.86989764584401

Data Types

Name	Type	Description
Integers	int	Whole numbers, such as: 3 300 200
Floating point	float	Numbers with a decimal point: 2.3 4.6 100.0
Strings	str	Ordered sequence of characters: "hello" 'Sammy' "2000" "楽しい"
Lists	list	Ordered sequence of objects: [10,"he-llo",200.3]
Dictio-naries	dict	Unordered Key:Value pairs: {"mykey" : "value" , "name" : "Frankie"}
Tuples	tup	Ordered immutable sequence of objects: (10,"hello",200.3)
Sets	set	Unordered collection of unique objects: {"a","b"}
Booleans	bool	Logical value indicating True or False