



EXPLORER

User Settingspercipio01_hello_world.pypercipio03_circle_formulas.pypercipio09_float_type.py

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PYTHON

Percipio_Python3-Course

01_Start

percipio01_hello_wor...percipio02_modules_i...percipio03_circle_for...

02_Data-Sequence Types

percipio04_int_types...percipio05_float_type...percipio06_math_fun...percipio07_boolean_t...percipio08_Strings.pypercipio09_float_type...percipio10_bytes_typ...percipio11_bytearray...percipio12_list_type.pypercipio13_tuple_type...percipio14_slice_type...percipio14a_list_copy...

03_Collections-Mappin...

04_Modules-Functions

05_Classes

06_Working-with-Files

07_Comprehensions

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'''
percipio09_float_type.py
Percipio video: Data & Sequence Types; The Float Type in Python
Floating module is subject to rounding errors. Use the Decimal module if this is a concern.
'''
n1 = '\n'
print(n1)
x = 5.0
type(x) # add a decimal to any integer & Python auto-assigns the float type
y = float.fromhex('A') # Using a hexadecimal value ('A'), assigns a float/decimal type/class to Y
 (https://simple.wikipedia.org/wiki/Hexadecimal_numeral_system)
print('x =', x)
print('y =', y)
print('x.as_integer_ratio() =', x.as_integer_ratio()) # shows ratio of x at 5.0 as 5 to 1 (EXPLAIN?
 ?)
print('y.hex() =', y.hex()) # hexadecimal representation of y value
Typical comparisons can be made
print('x == y =', x == y) #
print('x != y =', x != y) #
print('x >= y =', x >= y) #
print('x > y =', x > y) #
print('x <= y =', x <= y) #
print('x < y =', x < y) #
The usual operators can be used:
print('x + y =', x + y) #
print('x - y =', x - y) #
print('x * y =', x * y) #
print('x / y =', x / y) #
print('x // y =', x // y) #
print('x % y =', x % y) #
print('x ** y =', x ** y) #
There are several useful built in functions:



EXPLORER

{} User Settings percipio01_hello_world.py percipio03_circle_formulas.py percipio09_float_type.py x

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03_Collections-Mappin... 04_Modules-Functions

30 # There are several useful built in functions:

31 print('divmod(x, y) =', divmod(x, y)) #

32 print('pow(x, y) =', pow(x, y)) #

33 print('abs(-x) =', abs(-x)) #

34 print('int(x) =', int(x)) # convert a floating point number to an integer

35 print('float(10) =', float(10)) # convert an integer number to a floating point number

36 # Inline notation can also be used:

37 print('x = x + y =', end = ' ') #

38 x += y

39 print(x) #

40 print('x = x + y =', end = ' ') #

41 x -= y

42 print(x) #

43 print('x = x * y =', end = ' ') #

44 x *= y

45 print(x) #

46 print('x = x / y =', end = ' ') #

47 x /= y

48 print(x) #

49 # Multiple assignments can be done

50 x, y = 4.0, 2.0

51 print('x =', x, ',', 'y =', y)

52 # Bitwise operators can not be used on the float type

53 # Floating module is subject to rounding errors. Use the Decimal module if this is a concern.

54 '''

55 RESULTS:



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55 RESULTS:

56 x = 5.0

57 y = 10.0

58 x.as_integer_ratio() = (5, 1)

59 y.hex() = 0x1.4000000000000p+3

60 x == y = False

61 x != y = True

62 x >= y = False

63 x > y = False

64 x <= y = True

65 x < y = True

66 x + y = 15.0

67 x - y = -5.0

68 x * y = 50.0

69 x / y = 0.5

70 x // y = 0.0

71 x % y = 5.0

72 x ** y = 9765625.0

73 divmod(x, y) = (0.0, 5.0)

74 pow(x, y) = 9765625.0

75 abs(-x) = 5.0

76 int(x) = 5

77 float(10)) = 10.0

78 x = x + y = 15.0

79 x = x + y = 5.0

80 x = x * y = 50.0

81 x = x / y = 5.0

82 x = 4.0 , y = 2.0

83 ...