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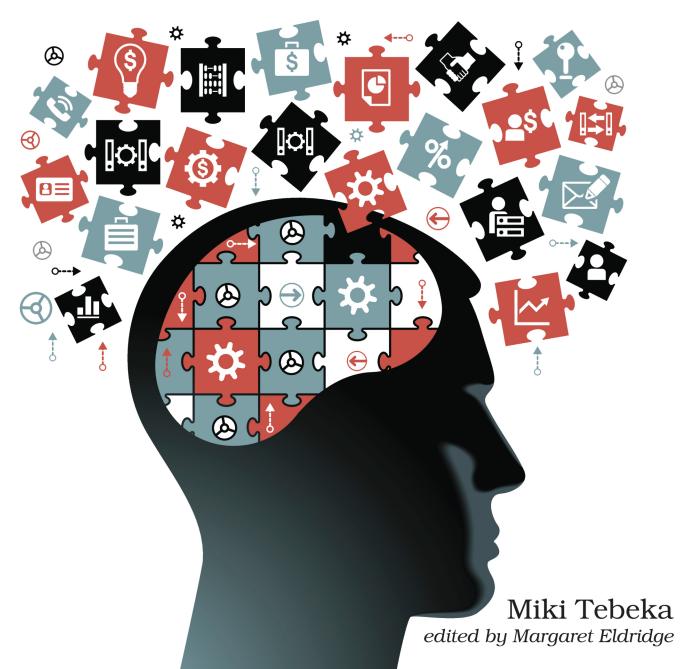
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Puzzle 2

A Slice of π

pi.py
π = 355 / 113
print(π)

Guess the Output



Try to guess what the output is before moving to the next page.

This code will print: 3.1415929203539825

There are two surprising things here: one is that π is a valid identifier, and the second is that 355 / 113 computes to a float.

Let's start with π (the Greek letter pi). Python 3 changed the default encoding for source files to UTF-8 and allows Unicode identifiers.

This can be fun to write, but in practice it'll make your coworkers' lives harder. I can easily type π in the Vim editor that I use; however, most editors and IDEs will require more effort.

One area where I've found that Unicode identifiers are helpful is when translating mathematical formulas to code. Apart from that, stick to plain old ASCII.

Now for 355 / 113. Python 3 does the right mathematical division. If you try this code in Python 2, you'll get 3 since Python 2 shows more of its C origins. If you want integer division to return an int in Python 3, use the integer operator (e.g., 355 integer 113). This is handy when calculating indices, which must be whole numbers.

Further Reading

Identifiers and Keywords in the Python Reference docs.python.org/3/reference/lexical_analysis.html#identifiers

PEP 3120: Using UTF-8 as the Default Source Encoding python.org/dev/peps/pep-3120/

PEP 263: Defining Python Source Code Encodings python.org/dev/peps/pep-0263/

Vim Editor vim.org