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Exercise 6

Finger Exercises due Aug 5, 2020 20:30 -03 *Completo*

Exercise 6

10/10 points (graded)

ESTIMATED TIME TO COMPLETE: 5 minutes
Note that you will have to answer all questions before you can click the Check button.

For each of the following expressions, indicate the value returned, or if the evaluation would lead to an error, write the word 'error' (note this is a word, not a string, no quotes). While you could simply type these expressions into an IDE, we encourage you to answer them directly since this will help reinforce your understanding of basic Python expressions.

For decimal answers, give the full result, or four decimal places of accuracy (whichever is shortest).

Floating point errors

Decimal numbers cannot be stored exactly in the computer because the computer does not have an infinite amount of memory. So decimal numbers are rounded when stored. When you do calculations with these numbers, your final result will be different than the actual result. For example, you may get something like 5.0000000044 instead of 5.0. This is called floating-point rounding error.

- `6 + 12 -3`

15 Answer: 15

- `2 * 3.0`

  6.0

  ✔ **Answer:** 6.0

- `- - 4`

  4

  ✔ **Answer:** 4

- `10/3`

  3.3333

  ✔ **Answer:** 3.3333

- `10.0/3.0`

  3.3333

  ✔ **Answer:** 3.3333

- `(2 + 3) * 4`

  20

  ✔ **Answer:** 20

- `2 + 3 * 4`

  14

  ✔ **Answer:** 14

- `2**3 + 1`

  9

  ✔ **Answer:** 9

- `2.1 ** 2.0`

  4.41

  ✔ **Answer:** 4.41

- `2.2 * 3.0`

6.6

✔ **Answer:** 6.6

Explanation:

For the last problem (10), typing the expression into your Python interpreter may give a result that is not exact. For example, 6.6000000000000005 instead of 6.6. This is because computers have difficulty storing fractions exactly in binary. So when performing calculations, numbers first get converted to binary then the calculation is performed and the result converted back into decimal. However, fractions cannot be stored exactly in binary (for example, there is no way to store 0.33333 repeating exactly) so we introduce these small rounding errors that propagate until the final answer.

Enviar

Answers are displayed within the problem

Exercise 6

Ocultar discussão

Topic: Lecture 1 / Exercise 6

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Float type limitation
What is the maximum number of decimal point allowed in float type? 2

Why 5 is being added as a last decimal?
When I put 10/3 or 10.0/3.0, IDE gives back 3.3333333333333335. Even it is the same with expres... 4

10/3 and 10.0/3.0
My IDE gives me back 3.3333333333333335, so I put that in. And got them both "wrong", I unders... 4

--4
The answer seems to be 4 because it's supposedly read as " - OF - 4 // -(-4) " = 4 1

6 + 12 -3 Question Layout
On my first try I read the expression as 6(space)+(space)12(space)-3. I saw there is no space betw... 2

4th and 5th question
?why 3.3 is wrong 2

I am puzzled...
can somebody tell me what is the answer for: 2**3 +1...? 7

--4 14

This question was a tricky one. At the first go, I didn't really understood the concept behind it.

Why would 2**3 + 1 = 9 and 2.1 ** 2.0 = 4.41
I felt confused. Can somebody help me? 3

2.1 ** 2.0
Can someone explain why the answer is 4.41 ? 4

wrong answer for 10/3 question
10/3 gives the answer to be 3.3333333333333335 and not actually 3.3333, which means either th... 7

Just to keep track
mine runs 10/3 Out[3]: 3.3333333333333335 4

10/3=3.3333
Why? 9