**Operators**

*See the lesson notes at*: [dmaccarthy.github.io/sci/#cs\_new/sp1/oper](https://dmaccarthy.github.io/sci/#cs_new/sp1/oper)

1. Predict the type (**int** or **float**) and value of the result of each Python expression. If the expression causes an error, explain why. Assume that the **sqrt** function has been imported from the **math** module.

|  |  |  |
| --- | --- | --- |
| **Expression** | **Type** | **Value or Explanation** |
| 16 / 5 |  |  |
| 16 // 5 |  |  |
| 16 % 5 |  |  |
| 8 + (5 \* 2) |  |  |
| (8 + 5) \* 2 |  |  |
| 8 + 5 \* 2 |  |  |
| 2 \*\* 5 - 1 |  |  |
| 2 \*\* (5 - 1) |  |  |
| sqrt(13.0 \*\* 2 - 5.0 \*\* 2) |  |  |

2. Suppose the following Python expressions were evaluated after assigning **s = 28** and **t = 9**. Predict the type (**int** or **float**) and value of the result of each Python expression. If the expression causes an error, explain why.

|  |  |  |
| --- | --- | --- |
| **Expression** | **Type** | **Value or Explanation** |
| s // t |  |  |
| s % t |  |  |
| s / t |  |  |

3. Suppose the following Python statements were executed:

**x = 6 / 5**

**y = 3 \* x**

**z = round(y)**

Predict the type (**int** or **float**) and value of each variable.

|  |  |  |
| --- | --- | --- |
| **Expression** | **Type** | **Value** |
| x |  |  |
| y |  |  |
| z |  |  |