Assignment 2

SYST13416 Linux Operating System, Sheridan College, Summer 2022

Write a bash script called `compute` (no extension) that will calculate addition, subtraction, multiplication, and division of two numbers (real and integer). If both numbers are integers, return an integer result, if one of the values is a real, return real number with default precision (unless specified, see below). Note the order of arguments. Examples:

```
compute 7 + 3
compute 9.37 / 7.21
compute 100 x 2.21
compute 2783.34 – 25
```

Allow also calculation of two functions, hypotenuse (see earlier handout) and area of circle (given radius). These calculations will always be real, even if input is integer. The –f option token is followed by option argument which specifies function is to be calculated. Arguments (values) are listed last.

```
compute –f hyp 8.1 3.5
compute –f area 4.21
```

The precision (scale) can be specified as an option with a single option argument. Examples:

```
compute –s 5 9.37 / 7.21
compute –s 9 –f hyp 8.1 3.5
compute –f hyp –s 3 8.1 3.5
```

Include all error checking and handling. Include all appropriate inline documentation. Provide user help how to use the utility either when the sequence, value, or number of arguments is incorrect, or when user asks:

```
compute –h
compute –help
```

Submission

- Attach an electronic code printout (with line numbers) of compute (called `compute.pdf`). Note the printout should be human-readable, with proper headers,

footers, and page numbers.

- Attach `username.compute` file (text format) . Use FileZilla to download the file to your machine and then attach to the dropbox. Do NOT zip.
- Submit in SLATE Dropbox.

Note: Marks will be deducted for improper submission.

Note: This is a summative evaluation instrument—individual effort. Ask questions and discuss the problem only, NOT THE SOLUTION. Utilize the SLATE discussion board!
