COMP10001 Foundations of Computing
Semester 2, 2016

Tutorial Questions: Week 3

1. Assuming the assignments `i = 1`, `f = 2.0`, `s = "3"` and `t = "b4"` have been made, evaluate the following code snippets:

   - `i + f`
   - `str(i) + s`
   - `int(f) + int(s)`
   - `float(t[-1]) * i`

2. What is the printed output of the following code snippets:

   - `print("{} was a racehorse, {} was one too".format(11, 22))`
   - `print("One day {0} won a race, and {1} won one too".format(11, 22))`
   - `print("One day {h1} won a race, and {h2} won one too".format(h1=11, h2=22))`
   - `print("pi = {0:.5f} != {1:.5f}".format(3.141592653, 22/7))`
   - `print("n = {0:10.1f} != {1:10.5f}".format(12.3456, 12.3456))`

3. Given `num` containing an `int`, write a single-line program to calculate the number of digits in it.

4. What is wrong with this code? How can you fix it?

```
letter = input("Enter a letter: ")
if letter == 'a' or 'e' or 'i' or 'o' or 'u':
    print("vowel")
else:
    print("consonant")
```

5. Assuming the assignments `a=1`, `b=2`, `c=3.0` and `d=0` have been made, evaluate the following code snippets:

   - `a + b / c`
   - `(a + b) / c`
   - `b // int(c)`
   - `bool(d and not b or a)`
   - `bool((d and not b) or a)`
   - `bool(d and not (b or a))`

6. Assuming the assignment `s="internationalization"` has been made, evaluate the following code snippets:

   - `s[1]`
   - `s[:-1]`
   - `s[:6] + s[11:13]`
   - `s[25]`
   - `s[::-1]`
   - `s[:25]`