Quiz 1

Name: _____

Question 1. Each of the following Python expressions evaluates to some value. For each one, give the resulting value and its type (as one of `int`, `float`, `str`, or `list`).

	Value	**Type**
(a). 16/10	_____	_____
(b). 16.0/10.0	_____	_____
(c). 2**3	_____	_____
(d). `float`(5)	_____	_____
(e). "zom" + "pire"	_____	_____
(f). 15 % 10	_____	_____
(g). "%2d" % 10	_____	_____
(h). `range`(4)	_____	_____

Question 2. Each of the following Python programs prints some output. For each program, write the output that it produces. Make sure to write each line above the next when multiple lines are printed.

(a).

```
1 x = 2
2 y = 3
3 x = y + 1
4 print x
```

(b).

```
1 for variable in [1,2,4,7]:
2     print variable / 2
```

(c).

```
1 total = 0
2 for item in [6,4,2,3,0]:
3     total = total + item
4 print item
```

Question 3. Write a program which takes a word from the user and displays it vertically, e.g. one letter on each line. For instance, the following might be a transcript of that program:

```
What's the magic word? pumpkin
p
u
m
p
k
i
n
```

Question 4. Consider the following program, desired output, and actual output.

Program	Desired	Actual
1 `total = 0`	1	0
2 `for n in range(5):`	4	1
3 `square = n**2`	9	4
4 `print square`	16	9
5 `total = total + square`	25	16
6 `print "Total: " + total`	Total: 55	`Traceback (most recent call last):`
		`File "question3.py", line 6, in <module>`
		`print "Total: " + total`
		`TypeError: cannot concatenate 'str' and 'int' objects`

We want the program to have the desired output (above middle) but, as written, it prints the actual output (above right) instead. There are two mistakes in the program which cause this to be the case. Find these mistakes and describe how to correct them. (Hint: read the error message closely. It will help you find one of the mistakes.)