

Sample Midterm

- Which of the following Python identifiers are legal variable names? For those that are not, say why not.
 - x
 - Celsius
 - spam3
 - <hello>
 - question?
- What is the data type (int, long int, float, string, list) of the following:
 - 3
 - 3.0
 - 3L
 - "hello"
 - 'x'
 - [1, 2, 3]
- Write the following formulas in Python:
 - $\frac{5}{9}f + 32$
 - 7×9
 - 4^2
- What does the following program print:

```
for i in "hello":
    print i, "-->", chr(ord(i)+1);
```
- What does the following program print?

```
for i in [1, 7, 4]:
    x = (-1) ** i * i;
    print i, x;
```
- (15 points) When I ran the following program:

```
x = input("Enter a number: ");
y = 1 / x;
print "The reciprocal of", x, "is", y;
```

I got the following error message:

```
Traceback (most recent call last):
  File "test.py", line 3, in <module>
    y = 1 / x;
ZeroDivisionError: integer division or modulo by zero
```

What caused the error? Please be specific.