

Your name: \_\_\_\_\_

1. **Scope.** Consider **the** code shown to the right. The code will produce an error message when **main** runs. What error message will be produced? That is, what is wrong with the code?

```
def main():
    a = 5
    foo()

def foo():
    print(a)
```

2. **Scope.** Consider the code shown below. The code will produce an error message when **main** runs. What error message will be produced? That is, what is wrong with the code?

```
def main():
    foo(4, 10)
    print(c)
```

```
def foo(a, b):
    c = a + b
```

3. **Calling functions, arguments/parameters.** Consider the code shown to the right. What does it display on the console when **main** runs?

```
def main():
    a = 5
    b = 3
    foo(a, b)
    print(a)
    print(b)
```

```
def foo(b, a):
    print(a)
    print(b)
    a = 100
    b = 300
```

4. **Calling functions, arguments/parameters, scope.** Consider the code shown to the right. Does the code produce an error message when **main** runs? If so, write **Error**. If not, show what gets displayed on the console.

```
def main():
    a = 10
    x = 33
    foo(a, x)
```

```
def foo(x, c):
    print(x)
    print(c)
```

5. **Returned values.** The code shown immediately to the right is silly. Explain why.

```
def main():
    foo(7, 2)

def foo(x, y):
    return x + y

main()
```

6. **Returned values.** Consider the code shown to the right. What does it display on the console when **main** runs? Hint: TWO lines are displayed.

```
def blah(x):
    print(x * x)

def main():
    print(blah(5))
```

```
size = 10
for k in range(3):
    size = size + 5
    print(k, size)
    size = size - k
    print(size)
```

7. **Tracing code by hand.** You are starting to learn how to “think like a computer”, tracing code and keeping track of the state of the computer. Do that now with the code snippet shown to the left, by showing what gets displayed on the console when the code runs.

Output:

8. The specification of a function tells which things?

Mark all that apply.

Any side effects of the function

What goes in

How the function works

What comes out