

CSI 31 Chapter 6 answers

True/False:

1. False

2. False (function can be called in many different places of the program, just make sure that you defined it before you are calling it)

3. True

4. False

5. False

6. False (a function can return as many values as we wish)

7. False (function can modify mutable objects. For example, lists are mutable objects, if passed to the function as parameter, the function can change/update the values of its elements, add new elements, delete elements; immutable objects function cannot modify.)

8. True

9. True

10. False

Multiple Choice:

1. b)

2. a)

3. a)

4. b)

5) d)

6. a)

7. d)

8. a)

9. d)

10. a)

Discussion: # 5

```
def cube(x):  
    answer = x * x * x  
    return answer
```

a) What does the function do?

The function calculates the cube of the provided (through parameter) numerical value and returns it.

b) Show how the program could use this function to print the value of y^3 , assuming y is a variable.

```
...  
result = cube(y)  
....
```

c) Here is the fragment of a program that uses this function:

```
answer = 4  
result = cube(3)  
print(answer, result)
```

The output from this fragment is 4 27. Explain why the output is not 27 27, even though `cube` seems to change the value of the `answer` to 27.

Answer: `answer` variable in function `cube` is a *local variable*. Its scope is bound to the body of the `cube` function only, hence as soon as the function `cube` is terminated, its `answer` variable is destroyed. The `answer` variable in the code we are given (in assignment `answer = 4`) is not connected to the `answer` variable of the `cube` function, hence it doesn't change its value.