

Computer Science 1	Exercises 09.01-06	Date:
Name:		Period:

1. It is in the nature of people to create things that make our lives simpler and more enjoyable. To that end, it is also in the nature of people to create _____ to make this process easier and more efficient.
2. Some of the first programming *tools* created were translating programs like _____ and _____.
3. What is a *subroutine*?
4. What is a *function*?
5. What is a *procedure*?
6. What is *Modular Programming*?
7. What is the difference between calling subroutines that are built into Python and calling subroutines that you have created yourself?
8. List the 5 things that are required in a user-defined procedure.
9. Look at programs **SimpleProcedures03.py**. Why does this program not execute?
10. Look at programs **SimpleProcedures04.py**. Why does this program not execute?
11. Look at programs **SimpleProcedures05.py**. Explain the “Invisible Indentation Error.”
12. Look at programs **SimpleProcedures06.py**. Why does this program not execute?
13. Compare programs **GraphicsProcedures01.py** and **GraphicsProcedures02.py**. Both draw the exact same 4 squares. Why is the second program so much shorter?

14. Is placing all those statements in the “**MAIN**” section of your program, without organizing them into separate procedures, considered “Good Program Design?”
15. In a well-designed program, what should the “**MAIN**” section of your program resemble?
16. Look at program **GraphicsProcedures06.py** and its output.
In the program, the 2 “Background” procedures are before the “House” and “Tree” procedures.
Why then is the background drawn on top of the house and the tree?
17. Look at program **GraphicsProcedures07.py** and its output.
How does this program fix the problem of program **GraphicsProcedures06.py**?
18. Look at programs **Library01.py**, **Library02.py** and **Library03.py**.
All 3 of these programs have procedure calls, but no procedure definitions.
How is it possible that these programs execute without any errors?
19. Can a program import more than one user-created library?
20. What is the first step in creating a big graphics program?
21. When you are finished with step 1, your program will not execute. Why is this?
22. What is the second step in creating a big graphics program?
23. In general terms, what is a *stub*?
24. What command is necessary to make stubs work in Python?
25. When you are finished with step 2, your program will execute, but it will have no output. Why is this?
26. What is the third step in creating a big graphics program?
27. What is the fourth step in creating a big graphics program?
28. What is the fifth step in creating a big graphics program?