**AP® Computer Science (A)**

**Exercises 16.01-0 4**

**Date:**

**Name:**

**Period:**

01. What are the areas of program design compromise?

Program design becomes a compromise between speed, memory usage, and program readability.

02. The most important consideration of any program is

Reliability

03. What are the fundamental program design rules?

- Write your program in a clear, consistent style.

- Use meaningful, self-documenting identifiers.

- Do not place all your program code in a single method, such as the main method or paint method.

- Create modules for recognizable tasks.

- Place common purpose modules in a class.

08. What were the 5 Steps of Programming in the pre-OOP days?

**#**

**Step Mission**

08.

Understand the problem

09.

Develop an algorithm

10.

Program an algorithm

11.

Test and debug the program

12.

Update and enhancement

13. Look at your answer for *#08* above. Does that still apply today?

Yes

14. What is an *algorithm*?

*.* A formula to solve a problem

15. Refer to the 5 steps above.

In which step are you actually writing the program in a programming language like Java?

*Step 3*

13. The first AP Magpi-Chatbot lab concentrates on

String manipulation and compound control structures

14. The second AP Elevens Lab concentrates on

One-dimensional arrays and program design

15. The third AP Picture Lab concentrates on

Two-dimensional arrays

16. Top-down design plans from

general to specific

17. Bottom-up design plans from

specific to general

16. Describe abstraction.

the concept of communicating about ideas without concern with the implementation of ideas

17. A good place to start in bottom-up implementation of a program is

unit class or foundation class

18. Examples of unit classes are

Cell, Card

19. How is a unit class tested for accuracy?

testing class

20. What might be a good second stage in program development?

debug and modify