**AP® Computer Science (A)**

**Exercises 13.01-06**

**Date: 2/6/17**

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**Period: F**

01. What are the 4 **Collection** classes in Java?

ArrayList, LinkedList, HashSet, TreeSet

02. What is a **Collection**?

A group of objects

03. What method is used to add data to a **Collection** object?

add()

04. What is a **List**?

A linear collection that allows access to any element

05. Can *lists* have duplicate elements?

*Yes*

06. What is a **Set**?

*An unordered collection without any duplicate elements*

07. What is abstraction?

The concept of communicating about ideas without concern for the implementation

08. What is an **interface**?

Just headers, no implementation

09. What kind of methods are put into an **interface**?

Abstract

10. Is the **abstract** reserved word required in an interface?

No

11. If an interface has 5 **abstract** methods, how many of them must be "implemented" if a class implements the **interface**?

All

12. If a **class** implements an **interface**, can you define additional methods in the class that were not declared in the interface?

Yes

13. Can one **class** be implemented from multiple **interface**s?

Yes

14. Can data be stored in an **interface**? If "yes" what kind?

Final fields

15. When declaring a *constant* in an **interface**, is the word **final** necessary?

No

16. Is the keyword **abstract** required for an **abstract class** and its **abstract** methods**?**

**Yes**

17. Can an **interface** or an **abstract class** have a *constructor*?

No

18. How is an abstract class different from a concrete class?

Basically a protocol

19. Where should a data structure be placed that stores individual student information?

In a concrete class

20. How many concrete classes are used in the High School program?

4

19. In the HighSchool case study how is the abstract class used?

For student information

21. How does a concrete class implement an interface?

Using the implements keyword

22. How does a concrete class implement an abstract class?

Using the implements keyword

23. How does an abstract class handle the abstract methods that are not implemented?

Errors

24. Is an adapter class declared with an interface, abstract class or concrete class?

Abstract

25. What is the purpose of an adapter class?

Make compiling easier