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| **APCS Exposure Java** | **Exercises 15.01-0 5** | **Date:** |
| **Name:** | | **Period:** |

1-5. What were the 5 Steps of Programming in the pre-OOP days? *(This counts as 5 questions.)*

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| **Step #** | **Step Mission** |
| 1 |  |
| 2 |  |
| 3 |  |
| 4 |  |
| 5 |  |

2. Look at your answer for *Step 1* above. Does that still apply today?

3. What is an *algorithm*?

4. Refer to the 5 steps above.

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

5. Refer again to the 5 steps above.

These exact same 5 steps would still be used today in the creation of an individual \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

6-9. Now that *OOP* has become the *thing-to-do*, the program design steps need to be adjusted somewhat.

What are the 4 steps of program Design? *(This counts as 4 questions.)*

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| **Step #** | **Step Mission** |
| 1 |  |
| 2 |  |
| 3 |  |
| 4 |  |

10. Is *Program Design*covered on the APCS Exam?

11. Refer to the *Design Compromise Triangle* in your book.

Which of these 4 areas can NEVER be sacrificed?

12. All program specifications can be simplified to what 3 steps?

13. *Program specifications follow a top-down approach.* What does that mean?

14. What 2 things does a class *encapsulate*?

15. What kind of program revolves around a single class?

16. Should all of the methods for a large program be placed into the same class?

17. In most cases, and on the *AP Exam*, data attributes should be declared \_\_\_\_\_\_\_\_\_\_ and action methods should be declared \_\_\_\_\_\_\_\_\_\_.

18. What kind of method is declared **private**?

19. If data is to be declared public, what kind of data should it be?

20. Can a constructor be declared **private**?

21. List 4 synonyms for *class attributes*.

22. List 5 synonyms for *methods*.

23. Which type of methods is *read-only*?

24. Which type of methods is *read-write*?

25. What is a *precondition*?

26. What is a *postcondition*?